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## NOTES ON SOME APPLIANCES USED IN THE TREATMENT OF SEVERE COMPOUND FRACTURES OF THE EXTREMITIES.

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Probably the most serious injuries met with in the present war have been those associated with severe compound fractures of the long bones.

Many and various have been the devices in the nature of splints designed to deal effectively with these cases. The almost universal use of continuous saline irrigation for those injuries has led to the necessity of discarding some of the older forms of splints and to their replacement by more convenient, comfortable, and effective appliances.

The accompanying photographs depict a few of the more important arrangements in use in the hospitals at this base for dealing with severe compound fractures of the extremities.

The following points may be noted in the photographs.

Fig. 1. Hodgen's Splint, for fractures of the femur.

The limb is suspended from an overhead trolley running on rails. The weight of the limb is carefully counterpoised by bags of sand.

Fig. II. Wallace's Splint; arranged in the same manner as Hodgen's splint (Fig. I.).



Fig. I.

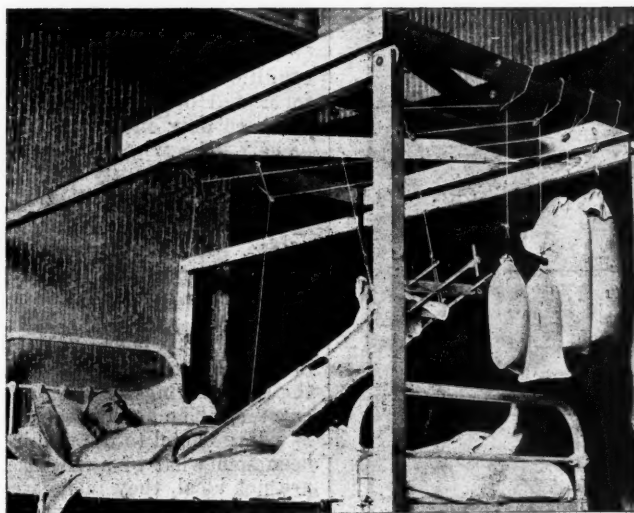


Fig. II.

Figs. III. and IV. A "gallows" hinged on a wooden upright at the head of the bed, with weight and pulley attachments used for the support of the splint applied for severe compound fractures of the upper extremity. The splints may be angular or straight, according to the circumstances of the case. When the limb attached to the splint is properly counterbalanced by the weighted sandbags the patient can get out of bed quite easily, and stand on the floor or sit on a chair. He can also move without difficulty in bed.

In connexion with these different forms of splints it is quite easy to arrange for the provision of continuous irrigation of any wounds when this

is desired. The dressing of the wounds can be carried out with ease and with a minimum of pain to the

patient. The comfort experienced as a result of



Fig. III.

being able to move himself about in bed is greatly

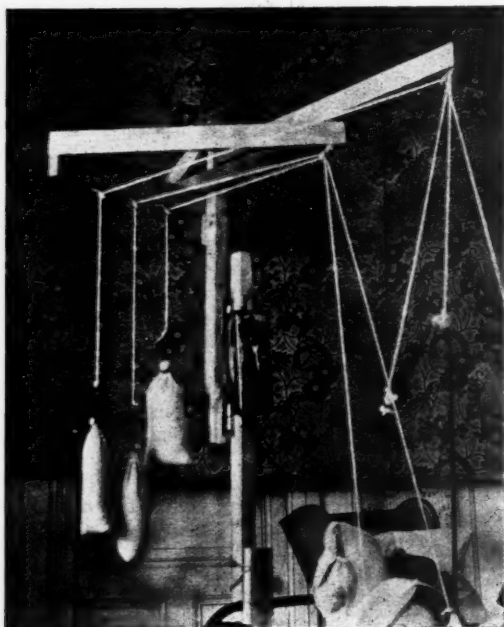


Fig. IV.

appreciated by the patient.

#### NOTES ON THE MEDICAL WORK OF THE FIRST AUSTRALIAN GENERAL HOSPITAL.

By Walter Summons, M.D.,

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This hospital has now been in operation in the Heliopolis Palace Hotel for just six months. A review of the work done in it will therefore be of interest. This article will be limited to that of the medical wards.

The requirements in bed accommodation increased rapidly till there were four double sections of 104 beds each. Each consisted of an acute section of 52 beds, and a corresponding convalescent section of 52 beds. When the surgical work was suddenly changed from that arising out of the garrison troops to the treating of large numbers of wounded, the convalescent sections were moved to other buildings in the vicinity and the medical wards curtailed, so that, for the last three months, there have been only three sections each of 50 indoor beds and 21 outside, on the large piazza. One medical officer is in charge of each section. In addition, a variable number (between twenty and twenty-five) of beds is set apart for sick officers. Lieutenant-Colonel Maudsley has been in charge of the latter and is also consulting physician to the hospital.

The infectious cases, in the first instance, received treatment in a tent hospital, out in the desert, the worst cases being brought to tents erected in the grounds of the Palace. As this arrangement did not prove satisfactory, all cases of infectious disease were put into the racecourse pavilion. A large, central hospital has recently been opened at Shubra for cases from all the Cairo hospitals.

While medical cases of all varieties have been treated, two groups of diseases have predominated. Between these two groups the diaphragm has been the dividing line—in the first three months the bulk of the cases were respiratory; latterly, the infective conditions of the alimentary canal, chiefly typhoid fever and dysentery, formed the majority. There has been only one type of patient under treatment, namely, men with healthy bodies between the ages of eighteen and forty, and, as a consequence, the results have been excellent.

The medical wards are the large rooms of the palace. The dining-room originally had one hundred beds; now the pressure is lessened it contains seventy, the number allowed by regulation for the floor space available. The central reception hall contains sixty beds, and the reading-room twenty beds. The beds are well arranged and orderly, and the surroundings of the patients are palatial in the extreme. The hotel is sewered, and the adaptability of a large hotel to the requirements of a hospital has been somewhat of a surprise. Though the adjuncts are not ideal, they in no way impair the efficiency. Electric fans have been necessary, and as the fittings are modern, no difficulty has arisen in fixing the fans where required. The central reception hall is cool, owing to its being more or less of an internal room. On that account one might expect it to be an ill-

ventilated room. This is not so, as the hall rises to a dome at least seventy-five feet high, in which there is a number of windows. These windows, and others let into recesses, serve not only to give adequate lighting, but, combined with the large, open doorways and alcoves, permit of adequate but not superfluous ventilation.

The nursing staff has been excellent, though at times a more ample staff would have lessened the strain. The sisters have been compelled to do more than is usually expected of them in a military hospital. Moreover, the nursing orderlies, in gaining experience, are becoming more efficient, particularly since the men to whom the duties were distasteful have been transferred or exchanged.

For drugs we have had to be satisfied with a smaller pharmacopœia than is usually available for the majority of practitioners. Nevertheless, all the essentials were available, particularly the vaccines and anti-sera. Hence it may safely be said that the work has been well performed, considering that the conditions are war conditions.

Doubtless the question has been asked by many, Why was Cairo chosen as the site of the Australian Hospitals, seeing that it is a long way from the seat of military operations? The reply is, there was urgent need for base hospitals during the early days of training, and there are still large camps in the neighbourhood of Cairo. We found our sphere of usefulness from the outset. Then, again, it is a huge task to transfer a base hospital, and, moreover, when the troops did move off to Gallipoli we expected the wounded in a very short time. As a matter of fact, No. 2 Australian General Hospital was in process of moving from Mena House to Ghezireh Palace when the first wounded arrived, much to everyone's discomfort. The reply from Headquarters was that there was no building available for the Australian Hospitals at Alexandria was followed subsequently by numbers of British, French and other hospitals being established. This will doubtless be discussed when active operations have ceased.

The advantages of Egypt for water and supplies of all kinds are obvious, as compared with places like Lemnos and Cyprus, amongst the few localities that were available. A convalescent camp is established at Cyprus, and the Nos. 1 and 2 Stationary Hospitals and other hospitals are at Lemnos. No. 3 Australian General Hospital has also been despatched to that place. The difficulties of water supply and sewerage will be paramount. As a set-off to its advantages, the temperature of Cairo throughout the summer has been trying to the staff and more so to the sick and wounded. Special precautions have had to be adopted in the training and housing of the troops, and I think I am correct in stating that this is the first time British troops have been under canvas during the summer in Egypt. The clothing of the troops had to be modified at once to suit the tropics, and few of the soldiers have worn more than a canvas shirt, knickers of drill, helmet, puttees and boots.

In the wards there have been at least three deaths from heat stroke, as well as cases of disease in which the end has been hastened by the high temperature.

A man who arrived from Suez one night, was sent to hospital after midnight with a temperature of 107° Fahr.; he died at 8 a.m. the same morning, in spite of continuous treatment and ice packing, which lowered his temperature to normal. At the autopsy there was congestion of the brain, but no other evidence of disease or infection. The body temperature of the majority of the febrile cases on admission is higher than we are accustomed to find in Melbourne.

The daily shade temperature has been persistently high, being seldom below 95° F., though rarely above 105° F. The highest has been 114° F. The heat starts at seven in the morning, and does not pass off till seven at night. There is but little change from day to day. Once only has rain fallen, and that some months ago now. The night temperature, likewise, has continued to be high, and in the building for some months did not fall below 80° F. The wet bulb temperature has usually been about 10° lower than that of the dry bulb, except at night time, when they more closely approximate one another. The difference is frequently as little as 5°. From the time of writing onwards, the humidity will increase with the rising of the Nile. In February, the climate was perfect; warm, bright days and keen, bracing nights. The great contrast between the day and night at that time was doubtless a large factor in the prevalence of respiratory diseases amongst the men under canvas.

The turnover of patients has been large, but the statistics are vitiated in several ways. Soldiers have been re-admitted for purposes of examination by the Medical Board, men have been transferred, and so forth. The personal factor has come in as regards the nomenclature of disease. Moreover, in camp life a soldier is either fit for duty or sick. If sick, he has been admitted to the General Hospitals, as no patients have been treated recently in the Field Ambulance tents, because of the heat. These milder cases go to the Auxiliary Hospitals, and not to the Heliopolis Palace. The only figures of value are those of the mortuary, where Professor Watson, of Adelaide, has made examinations in every instance. The clinical pathology has been assiduously performed by Captain Roy Watson, of Melbourne. On one occasion he suspected malaria, because of the vacuolation of the blood cells in a pleural effusion. He had not seen the patient, who was suffering from double pneumonia. The diagnosis of malaria as a double infection was confirmed by a subsequent blood smear.

The deaths from medical diseases, both from the garrison in Egypt and from the Mediterranean Expeditionary Force, for the six months, February to July inclusive, have totalled forty-nine, and are made up thus: Measles pneumonia, 11; pneumonia, 9; nervous system diseases, 10; dysentery, 7; typhoid fever, 3; liver abscess, 1; diphtheria, 1; malaria, 1; infective endocarditis, 1; cardiac disease, 1; digestive diseases, 1; sunstroke, 1.

Could it have been foreseen that measles would have been so prevalent amongst the troops, greater precautions could doubtless have been taken to segregate the cases and their contacts in Australia,



especially to prevent their embarking on the transports. In addition to heading the list in Egypt, measles pneumonia and pneumonia independent of measles accounted for three-fourths of the deaths on the transports. The hospital records set out a definite number of pneumonia deaths that we know were secondary to measles. It is certain that a number of other patients, who developed pneumonia and died of it had suffered an antecedent attack of measles.

The type of pneumonia was frequently a bronchopneumonia at the onset, and the disease became lobar in type within a short time. In other cases, pain was a predominant feature, and the signs were pleuritic and bronchitic for several days before evidence of lung consolidation could be found. It seemed that a larger proportion than usual developed empyema, and quite a number were complicated by a pyo-pericarditis. At the autopsy these cases usually presented an extensive mediastinitis. In these, as well as in other fatal cases, there was a large amount of fibrinous, adhering exudation in the pleural cavity, which could readily be stripped off. This accounts for the not infrequent delay in resolution in the pneumonias, and also the greater frequency of empyema.

Of the total number of pneumonia cases and the percentage of fatal ones, it is impossible to speak. Suffice it to say that there were always six patients suffering from acute pneumonia in each of the wards, and at times the number reached ten or twelve. The prevalence lessened as the nights became warmer, and as the soldiers got acclimatized. After the arrival of each batch of troops from Australia, however, an additional number of patients with this disease was admitted. In the early months, not only did every hospital patient have a cough, but in the camps the continuous chorus of coughs was worse than in church on a winter's morning. Examination of the sputum invariably showed Fraenkel's pneumococcus, and in many Friedländer's pneumobacillus also.

Treatment with anti-pneumococcal serum has undoubtedly been of value in shortening the attack and hence diminishing the death rate.

During the early months, acute rheumatism also was prevalent. There was a want of the usual reaction to salicylate treatment, and consequent chronic pains in the back and limbs persisted for months. Heart complications were common, and, altogether, much permanent invalidism resulted. An attack of rheumatism prior to enlistment should be a bar to enlistment. It has been difficult to form a correct estimate of the significance of rheumatism as a cause of invalidity. Soldiers have frequently exaggerated the pain and stiffness, but yet it would be a torture to them to carry a pack when suffering from a persistent backache.

The deaths from diseases of the nervous system, with the exception of a case of brain abscess, one of septic meningitis from otitis media and one of tuberculous meningitis, have all been the result of a meningococcal infection. Some of the cases have been extremely acute, and the patients have died a

few hours after the onset of meningeal symptoms. Several have had very definite petechial eruptions. More than half the patients brought to hospital with this diagnosis have recovered. Anti-meningococcal serum has been largely used, combined with lumbar puncture often repeated.

Of the later cases, infective diseases of the digestive tract have formed the bulk. In the wards at the time of writing there are about seventy cases of typhoid fever. The cases are of the usual type, and run a normal course of three or four weeks' fever. Many show an extensive rash, not only on the trunk, but also on the limbs. An enlarged spleen can be felt in 75% of the cases. I have been struck, on going into the wards, by the absence of the heavy, typhoid look, the absence of marked wasting, and the fact that the patients, in spite of their high temperature of 103° or 104° F. take an interest in things around them.

The Widal agglutination test has been negative in the majority of the cases, in spite of the fact that Captain Watson has employed three typhoid cultures; one brought from Melbourne, one obtained from the Citadel Hospital, and one obtained from a fatal case presenting typical typhoid lesions in the bowel. Only three patients have died; the case mortality is therefore extremely low. The period of invalidism from the front, on account of typhoid fever, will be on the average six months, while that on account of dysentery about three months. The indications seem to be that the typhoid bacillus will not claim the toll it did in the South African War. Inoculation has been almost universally carried out in the Australian Army; only a few men have come in who had not been inoculated with the anti-typhoid vaccine. Bearing in mind the cramped position of the troops at Anzac, the innumerable flies, the presence of a certain number of infective cases and the suitable climatic conditions for the growth of the typhoid bacillus, it is obvious that the sanitation of the trenches was surprisingly good. At the same time, there can be no doubt that inoculation has undoubtedly lessened the liability to the development of typhoid fever.

Dysentery has proved an extremely serious disease in many instances, as shown by the seven deaths. It is a disease which entails a large amount of suffering, many of the patients dreading to get off the bed pan. Local irrigations were tried, but without much success. *Oleum ricini*, combined with careful dieting and the judicious use of sedatives at night, tended to ameliorate the condition. Good results followed the injection of anti-dysenteric serum (10 c.cm. at a time, and repeated on alternate days for several doses). The blood and mucus seemed to disappear, and a more rapid improvement ensued. The serum was obtained from the Serum Institute at Alexandria, and was antagonistic to the Flexner, the Shiga and the Y bacilli. Not infrequently violent serum sickness supervened twelve or fourteen days later, with marked rashes and arthritic pains. At the autopsies the large bowel was found extensively ulcerated and the small bowel frequently showed congested patches and some ulceration. One



death resulted from perforation of a small, punched-out ulcer; another from inflammation of the appendix, perforation and peritonitis, and in another case there was intussusception of the *caput coli*, the large and small bowel had matted together, and there was a gangrenous condition of the caecum. The Flexner type of bacillus was found when the causative organism was isolated.

Two patients with long-standing dysentery were admitted. There was abscess of the liver, and, in a third case the amœbæ of dysentery was found in the stools. One of the two cases came to autopsy, and the liver was found to be completely riddled with pyæmic abscess. After several abscesses had formed, the other patient was finally invalided to Australia. Injections of emetine have been employed in cases that resisted treatment, but as the cases were not of amœbic origin, no good resulted.

Quite a number of cases of malaria have been treated, and in one case the man died of malignant malaria. The sources of the malarial infection are world-wide. The disease contracted at Rabaul seemed to be most serious. A certain proportion of the malaria undoubtedly was contracted in Egypt, but none at Gallipoli. Unfortunately, the amount of available quinine is now limited, and probably this drug will soon be unobtainable.

The infectious diseases have not been very prevalent, with the exception of measles. Diphtheria claimed one death after the pulse-rate had been slowed down to between twenty and thirty for several days. Scarlet fever has been somewhat rare, and its manifestation mild. Several cases of small-pox have been isolated, but only one gained admission to this hospital. This state of affairs in a small-pox infested community, with the troops continually visiting the slum districts of Cairo, speaks strongly for the efficacy of the vaccination of the troops. So far, no case of cholera has occurred, and it is doubtful if any case of Malta fever has been correctly diagnosed as such. Typhus is endemic amongst the local population in the vicinity of the military camps. Nevertheless, only one undoubted case has occurred amongst the Australian troops, and that was at No. 2 Australian General Hospital.

The health of the staff has not been of the best. A large percentage of the nursing and orderly staff is off duty all the time, whilst the medical officers have had more than their share of sickness. The persistently hot climate, combined with overwork, the inability to take adequate exercise, and the added risk of disease inseparable from hospital life, have all tended to bring this result about.

#### THE TREATMENT OF SYPHILIS: GONORRHOEA.<sup>1</sup>

By G. L. Lillies, M.D., B.S. (Melb.),  
Perth.

When Dr. Woods asked me to read a paper before you to-night, I had grave doubts as to my ability to give you anything at all interesting or practical, but I came to the conclusion that as we all see many cases of syphilis and gonorrhœa, and as

I had lately spent a certain amount of time both at the Lock Hospital and St. Peter's Hospital, in London, I might attempt to read you a paper on the treatment of those two conditions. They are unpleasant, both to the patient and the medical man dealing with them, but unfortunately they exist, and it is our duty to use every means in our power to stamp them out.

In dealing with syphilis, I propose to leave the parasyphilitic conditions, such as locomotor ataxia, general paralysis of the insane, etc., severely alone, nor will I touch on aneurysm of the aorta, which, according to the Wassermann reaction, must be regarded as of syphilitic origin, since a positive reaction is obtained in 95% of these cases.

Similarly, in gonorrhœa, I intend to confine my remarks to the local condition, and will not touch on such sequelæ as arthritis, ophthalmitis, stricture, etc., otherwise we should be here all night.

#### Syphilis.

##### Diagnosis.

Before dealing with the treatment of syphilis, I should like to say a word or two about the primary lesion, which, contrary to earlier teaching, is not infrequently multiple, the multiplicity being probably due to auto-inoculation in the first fourteen days of infection. I have seen four exactly similar chancreous erosions on the *glans penis*.

This chancreous erosion, by far the commonest type of chancre, is scarcely indurated at all, particularly when first it appears. It is simply a shiny, dark red erosion, usually circular or oval in shape, with a sharply defined margin; later it may either disappear or become indurated. The commonest site of appearance is the *glans penis*.

The indurated chancre is another common variety found most usually in the *sulcus coronarius*. It may easily be mistaken for a soft sore, except that in a chancre the *Spirochaeta pallida* may be demonstrated without difficulty by withdrawing some of the blood from the base of the sore by means of a glass capillary tube, mixing it on a glass slide with Indian ink and examining it with an oil emersion lens. The spirochaete stands out as a small, silvery spiral, possessing from 18 to 20 coils.

Apart from searching for the organism, the shorter incubation of the soft sore and the fact that it is not so indurated and is usually more deeply ulcerated than the Hunterian chancre, is a help in differentiating between these two conditions. But men who see 15 or 20 cases of syphilis in its first stage, on three or four days every week, are often in doubt; the great difficulty in diagnosing between these two conditions will therefore be appreciated. There are many other varieties of hard sore, but these two are by far the commonest, and the others are simply variations.

##### Sites.

The primary lesion may appear in all sorts of unexpected places. I have seen one on the abdomen, one at the inner canthus of the eye, another at the anal margin, and at an examination conducted at the College of Surgeons a boy was shown with a chancre on the tip of his nose. Other sites reported

<sup>1</sup> Read at a meeting of the Western Australian Branch of the British Medical Association on September 1, 1915.

are the finger, the lip, the tongue, the tonsil, the face and the breast.

#### Treatment.

Let us now consider the treatment of syphilis. First of all, is prophylaxis possible. From Metchnikoff's experiments on monkeys and on one student, who submitted himself to inoculation with the spirochaete, this seems tolerably certain, provided that treatment is resorted to as soon as possible. About 18 hours after inoculation, prophylactic treatment ceases to be of any avail. Every sailor in the American navy, on the morning after shore leave, is paraded before the ship's surgeon and has rubbed into his penis an ointment composed of calomel, lanoline and vaseline, besides undergoing prophylactic treatment for gonorrhœa. This procedure has reduced the number of cases of venereal disease in that navy markedly. It is now, I believe, being followed to a certain extent in the British Army in India.

#### Treatment of a Chancre.

Excision, cauterization by chemicals or the actual cautery, or any other local treatment of a chancre, is quite useless as a measure to cut short this disease, for by the time it appears, the spirochaete is well established in the blood stream. This has been proved time and again by the appearance of an early secondary rash, from which the organism may be obtained, while the primary lesion is still present.

#### General Treatment.

Coming now to the general treatment, mercury was recognized, until quite recently, as the only specific for syphilis. It now appears possible that we have a second in the derivatives of arsenic.

These drugs certainly clear up symptoms, and even prevent their appearance, but whether they are capable of effecting a permanent cure remains to be seen. At present, no one would feel confident in the result of his treatment, if he relied on injections of one or other of the arsenical preparations, without following it with a thorough course of mercury and potassium iodide.

#### Mercurial Treatment.

Before beginning a course of treatment with mercury, all old tooth stumps should be removed, teeth stopped and freed from tartar and the patient given explicit directions how to take care of his mouth during treatment. After each meal the teeth should be well cleaned and four or five times a day an astringent mouth wash, such as potassium chlorate, must be used.

On the first appearance of stomatitis, the mercurial treatment must be discontinued, saline aperients given and three times a day a mixture containing potassium chlorate. Dealing thus promptly with early stomatitis obviates the occurrence of ulceration, necrosis of the jaw and loss of teeth, which formerly brought the use of mercury into such ill repute.

Administration.—This drug may be introduced into the system in several ways, the chief in order of merit being: (1) By ingestion, (2) by inunction, (3) by intramuscular injection.

Ingestion.—By far the most unsatisfactory and unscientific way of giving mercury is by the mouth;

in fact, the only advantage of this method of exhibiting the drug is that stomatitis is less likely to occur. This is more than counteracted by the uncertainty as to how much of the drug gets into the system, partly owing to the patient forgetting to take his medicine, and partly owing to the varying absorptive powers of each individual's gastro-intestinal track. Added to this, there is the great liability to gastro-enteritis.

If for any reason, such as dermatitis following inunction, or inability of the patient to attend his doctor for injections, mercury has to be given by ingestion, the best preparation to use is the perchloride, either in the form of a pill with *Ext. opii* and *Ext. guaiaci*, or else in a mixture. The dosage requires adaption to each individual case, since no two people tolerate mercury alike. The average dose for a man is  $\frac{1}{2}$  gr. daily, and for a woman  $\frac{1}{3}$  gr.

Inunction.—The oldest and at the same time a fairly useful method of administering mercury is by inunction. This method was employed in the fifteenth century, but owing to the reckless way in which it was carried out, it entirely lost favour. If used with care in regard to hygiene and to the preparation employed, it is a rapid and satisfactory means of mercurialization. It certainly has disadvantages, in that it is a dirty procedure, and, moreover, there is a very real risk of dermatitis and at times stomatitis and diarrhœa. In addition, the question of rubbing ointment in daily for at least a quarter of an hour becomes irksome to the patient.

A very suitable ointment for inunction is one composed of *unguentum hydrargyri*, lanoline and benzoated lard.

Each morning, on rising, the patient should take a warm bath. A drachm or more of the ointment is then rubbed in, for from 15 to 20 minutes, to a different part of the body at each application. The part so treated should look as if black lead had been applied; shiny, but not greasy.

A course of mercurial treatment by this method should last for from twenty to thirty days. The rubbings should then be intermitted for at least two months, during which time a course of potassium iodide should be given, in order to cause absorption of the exudates and fibrous tissue which tend to form round the spirochaetes and prevent the mercury from reaching them. These periods of inunction and intermission are kept up for from 18 months to 2 years.

Injection.—The best method of giving this drug seems to me to be by intramuscular injection. When given as recommended by McDonough it is absolutely painless, cleanly, regular and accurate in dosage, and causes no inconvenience to the patient beyond a weekly visit to his medical man.

Certainly a few cases of mercurial embolism have been reported, but these are very rare indeed.

Ointment.—The preparation of mercury used is an emulsion of the metal itself, composed of metallic mercury, anhydrous lanolin, chlorbutol and liquid paraffin. The injection of this preparation is absolutely painless, and I have never seen any nodosities left at the site of injection, as is the case with other preparations.

**Technique.**—The method of administration is exceedingly simple. A hypodermic syringe, a needle (preferably made of platinum-iridium) and a little tincture of iodine, are all the armamentaria necessary. The syringe and needle can be quite efficiently cleansed in alcohol and ether, though at the Lock Hospital all syringes and needles are sterilized in boiling oil. The patient's skin, preferably over the buttock, is painted with iodine and a dose of the mercurial oil injected, care being taken that the injection is intramuscular. In other words, a sufficiently long needle must be used, and the injection must be made directly at right angles to the skin.

The dose varies from one to three grains of metallic mercury. One injection is given each week.

**Routine.**—It is impossible to lay down hard and fast rules for the duration of these injections without intermission, but if the patient is tolerant of mercury and shows no unpleasant symptoms, it is recommended to keep the first series going for eight weeks, and then to intermit for eight weeks. The second series also lasts if possible for six weeks, and is followed by an intermission of two months. The third course of injections occupies eight weeks' injection, with four months' rest. Then further injections are given during one month, and a period of six months follows without any injection. The final stage of treatment has a duration of two months, with two months' rest. At the termination of this period, that is, after two years' treatment, a cure may be expected, but the patient should not be lost sight of until his blood has given two negative Wassermann reactions, one before and one after a provocative dose of neo-salvarsan.

During all the periods of intermission, potassium iodide should be given in large doses, commencing with ten grains, increasing rapidly to half a drachm or more three times a day. This should be continued during the shorter periods of rest, but in the longer periods it is as well to intermit for a week occasionally. The drug should always be taken in at least a tumbler full of water, and if *liq. arsenicalis* is added to the mixture the risk of iodism is considerably reduced. The soluble salts of mercury, chiefly the perchloride, cyanide and biniodide, have been used for injections, but they are acutely painful; they have little effect on lesions of the advanced stages, and, owing to their being absorbed and eliminated so rapidly, they need to be injected daily.

As regards the insoluble salt, calomel, it likewise causes great pain at the site of injection, and, moreover, its effect, though rapid, is short-lived as compared with the metal itself.

**Other Methods.**—Other methods by which mercury has been given are by fumigation, which is cumbersome and unscientific, and by intravenous injection, which is distinctly dangerous.

#### *Arsenical Preparations.*

It was not until 1906 that arsenical preparations were first used in the treatment of syphilis. In that year Uhlenhuth suggested using atoxyl, a sodium salt of arsenic acid, owing to the good results he had obtained in the treatment of sleeping sickness, which, like syphilis, is a protozoal disease.

On account of its toxic effects, this was soon given up, and soamin substituted, which still later gave way to arsacetin, the first arsenical preparation put forward by Ehrlich.

Arsacetin was then superseded by Ehrlich's three new preparations, which appeared at very short intervals, I refer to *salvarsan* ("606"), *neo-salvarsan* ("914"), which, while being almost as potent as salvarsan, is much more soluble and less toxic, and *salvarsan natrium*, or sodium salvarsan (number 1206a), which is said to combine the advantages of salvarsan and neo-salvarsan, whilst possessing none of their disadvantages.

The use of salvarsan is practically given up, and only the two last preparations are employed now, though, since the beginning of the war it has become increasingly difficult to procure them. During the last few months, French and British manufacturers are putting similar products on the market.

These drugs should never be given in any syphilitic nerve lesions. Their chief uses are for clearing up unsightly secondary lesions rapidly, for tertiary lesions, in which they act well, but not rapidly, and for diagnostic purposes in doubtful cases. After one negative Wassermann reaction has been obtained, a provocative dose of neo-salvarsan will frequently be followed by a positive reaction in syphilitic infections. This is possibly due to the fact that this drug, besides acting on the spirochaete, also tends to disperse the fibrous exudate and the tissue which surrounds it. Neo-salvarsan may be administered intramuscularly or intravenously, the latter method being the better.

The dose—0.9 gramme for a male, 0.6 gramme for a female, dissolved in six ounces of distilled water—may be repeated each week until all signs disappear or until a negative result to the Wassermann test is obtained.

The majority of men in London seem to confine the use of "914" to three types of cases:—

- (1) Those showing very virulent secondary lesions.
- (2) Those cases, and they are rare, which do not respond readily to mercury, and
- (3) Those hospital patients who come especially and ask for a dose of "606," and who can afford to pay for it.

While the good results of this drug are dramatic, the disasters are even more so, and bad symptoms may come on as early as fifteen minutes after administration.

I remember one case, that of a big, healthy man, with no obvious lesion, nervous or otherwise. He had been treated for 18 months with mercury, and his blood still gave a positive reaction to the Wassermann test. It was therefore thought advisable to give neo-salvarsan. A small dose (0.45 gramme) was given. Seven days later 0.9 gramme was given; an hour afterwards the patient felt cold and sick, though he did not vomit. After a restless night, he went out and did some business, but during the afternoon of that day felt much worse, vomited, and was bathed in perspiration. He felt that he could not get his breath. During the following night he was seized with fits, and became unconscious; all his



reflexes were exaggerated, and he showed a typical picture of acute encephalitis, with great general irritability. No albumin was present in the urine. He died without regaining consciousness, 48 hours after the drug had been given.

Unfortunately, when bad symptoms appear, treatment is of little avail.

The rectum and stomach should be washed out; venesection and an intravenous injection of saline solution resorted to and stimulants given. In spite of everything, the prognosis is distinctly bad. The commonest lesions found at the post mortem examination are a congestive or hemorrhagic encephalitis and some engorgement of the liver and kidneys.

#### **Congenital Syphilis.**

The treatment of congenital syphilis varies not a jot from that of the acquired variety, except in children under two years of age. Here, if neosalvarsan is considered necessary, owing to the virulence of the infection, it should be given to the mother, the child obtaining it through the milk.

In administering mercury to infants, a modified form of inunction has been for some time, and still is, the method of choice. The ointment is spread on to the child's binder each day, and the same binder used continuously for a week without change. It is a dirty but satisfactory method. The movements of the child's body against the binder performs all the rubbing that is necessary.

#### **Gonorrhœa.**

In regard to gonorrhœa, it has always appeared to me that treatment by drugs via the alimentary canal is not of much use in obtaining a cure. In the majority of cases, certainly, the obvious discharge clears up, but many gonococci are left lurking in the orifices of glands and folds of mucous membrane along the urethra, waiting a favourable opportunity to sally forth to a fresh attack. I am quite prepared to be severely criticized for this, but I should like to ask all believers in the treatment of gonorrhœa by medicine to examine the urine of their cured patients, and in it they will see minute shreds of muco-pus; moreover, in many a history of some slight moisture at the urethral opening on rising in the morning will be obtained, and the gonococcus can be cultivated from the fluid obtained by massaging the prostate.

Internal medication should only be used as an adjunct to local treatment. Its chief uses are confined to those cases which at first are too acutely painful to stand irrigation, and those later cases, which develop a prostatitis or epididymitis, in which irrigation is most emphatically contra-indicated. For this purpose the most soothing and beneficial drug seems to be sandalwood oil.

#### **Prophylaxis.**

The prophylactic treatment of gonorrhœa is moderately successful, providing the patient is taken in hand as soon as possible after the risk of infection has occurred. The best drug for the purpose is heganol in a 3% solution, frequently instilled into the urethra, about 10 ounces of the solution being used in 24 hours. Other preparations of silver can be used, such as 5% protargol or 25% to 30% ar-

gyrol. As soon as a urethral discharge appears, we know our prophylaxis has failed, and must get on to other methods.

#### **Dietetics.**

Dietetic and hygienic measures are, of course, of vast importance, but it is hardly necessary to go into details, though I should like to plead for the value of copious drinking of bland fluids, and as much rest as possible.

For treating gonorrhœa by irrigation, a certain amount of paraphernalia is necessary. This comprises a receptacle to hold two pints or more of the solution used and capable of being raised and lowered at will, about three yards of rubber tubing, and a urethral nozzle of the Janet type, with a shield to protect the user. In washing out the anterior urethra, the patient should be standing, and cold lotion used, in order to stimulate contraction of the *compressor urethrae*. The receptacle is raised to a certain height above the patient, about six feet, in order that the fluid enters the urethra at a pressure sufficient to stretch it and obliterate all the folds therein.

In the case of the posterior urethra, the patient lies on his back, the solution used is warm and douche-can is raised twelve feet or more, to overcome the contraction of the compressor. While irrigation is proceeding, the patient is instructed to attempt to pass water. This act assists in overcoming the muscular contraction, and allows the fluid to reach the posterior part of the urethra and bladder.

In all cases of posterior urethritis, the anterior urethra is first washed out. The patient then lies down and his bladder is filled with the fluid, which he immediately passes, thus washing the posterior urethra. Next his prostate is massaged, emptying the crypts of pus and organisms. The bladder is again filled and the fluid voided, and the process is completed.

The ideal thing is to irrigate three times a day, but, unfortunately, few patients can afford the time for this. The majority can attend their doctor only once in 24 hours. It is, therefore, essential for them to use a urethral syringe frequently each day, to prevent discharges from accumulating in the anterior urethra.

No case should be considered cured until all mucopurulent shreds have disappeared from the urine. If possible, a bacteriological examination should be made after prostatic massage.

#### **Drugs.**

In acute urethritis, the most effective solution for irrigating purposes seems to be a solution of potassium permanganate. To begin with, the strength of the solution should be 1 in 8,000, and later this is increased to 1 in 4,000. If, after ten days, or a fortnight's treatment, there is no marked improvement, a 1% solution of albargin, the cheapest and probably most satisfactory of the organic silver salts, should be substituted.

In chronic cases, which fail to yield to either of the above, silver nitrate in 0.5% solutions may have to be used, but the present-day teaching is to keep off this drug as long as possible, as its use un-

doubtedly gives rise to an increased risk of the formation of a stricture.

There are some cases which no amount of irrigation will cure. These cases, when examined by the urethroscope, show one or more chronic ulcers along the urethra. In this condition, one or two applications of a 1% silver nitrate solution to the ulcer is followed by good results.

#### *Vaccine Treatment.*

Vaccine treatment for gonorrhœa seems to have its use mainly in the metastatic conditions, and in some cases of obstinate chronic urethritis. The best results seem to be obtained from a sensitized autogenous vaccine. The French are plucky enough to use this vaccine without killing the organism first, and report excellent results. Equally good results are obtained in England, where the organism is killed after the vaccine is sensitized.

#### *Gonorrhœa in Women.*

Gonorrhœa in women is such an enormous and, to me, hopeless subject, that I have left it alone. During the six months when I was House Surgeon at the Melbourne Women's Hospital, I worked very hard trying to obtain favourable results. I tried protargol, argyrol, potassium permanganate, lactic acid bacilli and anything else that was said to be of use, and I honestly do not remember one patient who was cured, and but few who were even improved to any extent.

### **University Intelligence.**

#### **THE UNIVERSITY OF SYDNEY.**

A monthly meeting of the Senate of the University of Sydney was held on November 2, 1915, at University Chambers, Phillip Street, Sydney.

The following degrees were conferred:—

M.D., in person—Henry Priestley.

M.B., Ch.M., in person—Roger Forrest Hughes. *In absentia*: John Herald Brown.

Ch.M.—William Leonard Millett.

B.E. (in Mechanical and Electrical Engineering)—Elliston Fauna Campbell.

The following examiners were appointed:—

(1) On the recommendation of the Dean of the Faculty of Law—Intermediate LL.B. Examination, March, 1916: The Professor of Law; Messrs. C. W. Waddell, M.A., LL.D.; N. de H. Rowland, B.A., LL.B.; C. A. Weston, B.A., LL.B. Final LL.B. Examination, December, 1915, and March, 1916: The Professor of Law; The Lecturers; Mr. John Meillon, M.A., LL.B.

(2) On the recommendation of the Professor of History—Dr. P. R. Cole, December examination.

A letter from Mr. G. S. Beeby, resigning his lectureship in Public Administration, in consequence of his absence from Sydney, was received.

It was resolved that Professor Peden and Assistant-Professor Vonwiller be appointed representatives of the Senate on the Board of Directors of the University Union for a period of twelve months.

It was also resolved that Mrs. Barff, M.A., and Miss E. M. Little, M.B., B.Sc., be appointed representatives of the Senate on the Board of Directors of the University Women's Union for a period of twelve months.

A letter was received from Professor David, applying for leave of absence for a period of one year, in order to proceed on active service with the Mining Battalion as Geologist.

A report from the Faculty of Science, recommending the amendment of regulations for the award of P. N. Russell Scholarships at the entrance examination was adopted.

1. Every candidate must produce evidence that he has satisfied one of the two following conditions:—

(a) That he has been engaged under approved conditions in the study of practical mechanical engineering for at least two years by apprenticeship or service in a mechanical workshop or drawing office, provided that one year shall have been spent in a workshop; or

(b) That he has satisfactorily completed the three-years course of trade instruction in Mechanical Engineering of the Technical Education Department of New South Wales.

2. The scholarships will be awarded after competitive examination, and the holders will be styled "Peter Nicol Russell Scholars."

3. The subjects of examination will be the following:

(a) English—Lower paper, 100 marks; higher paper, 150 marks.

(b) A general paper in English, including geography, 100 marks.

(c) Latin, Greek, French or German—Lower paper, 150 marks; higher paper, 200 marks.

(d) Mathematics, 450 marks.

(e) Mechanics, 150 marks.

(f) Mechanical drawing, 200 marks.

Optional subjects of which two may be taken:—

(a) Applied mechanics, 200 marks.

(b) Plane and solid geometrical drawing and perspective, 200 marks.

(c) Chemistry, 150 marks.

(d) Physics, 150 marks.

(e) A language not already taken—Lower paper, 150 marks; higher paper, 200 marks.

Unless candidates have previously qualified for matriculation, they must attain the matriculation pass standard in each of the compulsory subjects. They will be allowed to take two, but not more than two, of the optional subjects, but they will not receive credit in these unless they attain a satisfactory standard.

Subject to this provision, the scholarships will be awarded to the candidates who obtain the highest number of marks in this examination, provided that they shall have shown sufficient merit to enable them, in the opinion of the examiners, to profit by the award of a scholarship.

4. The scholar will be required to commence attendance forthwith as a matriculated student upon the University classes in the Department of Mechanical and Electrical Engineering, and he can only continue to hold the scholarship so long as he shall be of good conduct, and shall attend regularly the courses prescribed in the University for candidates for the degree of Bachelor of Engineering in the Department of Mechanical and Electrical Engineering, and shall pass the yearly examinations with distinction in at least one subject.

5. Each scholarship will be of the value of £75 per annum, and will be tenable for not more than four years, under the conditions mentioned in the preceding paragraph. The scholarship will be awarded in the first instance for a period of one year, and the scholar will be reappointed from year to year for the maximum period of four years, provided that his work be considered satisfactory. The payments will be quarterly, commencing on the first of April, after the student commences his University course.

6. The candidates' names, together with the matriculation fee of £2, and the required certificates, must be in the hands of the Registrar on the day set down in the University calendar as the last day for receiving entries for the University examinations in March.

With reference to the Busby Scholarship of Music, the following recommendations from the Organ Committee were adopted:—

The recommendations of the Organ Committee in regard to the Busby Scholarship were adopted. These recommendations provide for the selection of a matriculated student by the Organ Committee in the Lent Term, after an examination or competition. The scholarship is to be tenable

for one year, but may be renewed in special cases. Its value is to be £20. The scholar is to have the privilege of playing on the University organ, and will be required to give recitals and to play at functions. Applications for the scholarship are to be handed to the Warden before April 15 in each year.

## Medical Matters in Parliament.

### NEW SOUTH WALES.

At question time on November 2, 1915, Mr. Carmichael asked the Minister of Public Instruction whether he had noticed the extraordinary increase in the number of children who were wearing spectacles, presumably on the advice of opticians. He wished to know whether the honourable member had noticed that the number had increased greatly in the last few years. He sought information as to whether the honourable member was aware that there was no regulation in regard to any person practising as an optician, and whether he would consider the necessity of putting some control over this important profession as a guarantee to the public.

Dr. Arthur asked if they were facts that, during the last few years, the Department of Public Instruction had carried out a medical examination of the eyes of many children, that the attention of parents had been called to the defects that had been discovered in the eyesight, and that this practice explained the increased number of children wearing spectacles.

Mr. Arthur Griffith said that it was a fact that he had noticed, as everybody else had noticed, the large increase in the number of children wearing glasses. As suggested by the honourable member for Middle Harbour, Dr. Arthur, that increase was the result of the fact that the Department of Public Instruction now made it part of its duty to test the children's eyes and where there was a need for glasses to recommend the parents to obtain them. Furthermore, the Department had a list of opticians of good repute who were prepared at a minimum price to supply glasses for children. Parents were notified of the names of those firms which were recommended as able to supply satisfactory glasses. With regard to legislation, there was a Bill to regulate and control opticians on the business paper. He thought the Bill necessary, since an unqualified man, though he might be personally honest, might ruin the eyesight of a large number of children through lack of knowledge.

Mr. Gardiner asked the Minister to have an investigation made to find out how much of the defective eyesight was due to inefficient lighting in public schools, with a view to more effective lighting of the rooms.

Mr. Kearsley asked the Minister what provision, if any, was made for children whose eyesight was so impaired that they could not read ordinary print, even with glasses.

Mr. Arthur Griffith replied that the Department had taken no definite steps to deal with children whose sight was so bad that they could not read. They would have to be taught the alphabet for the blind. It was a fact that there were a number of old-established schools in which the light falls on the children's eyes in such a way as to injure the eyesight. These defects in the structure of the schools were being remedied all over the State as rapidly as the finances of the Department admitted.

Dr. Arthur asked the Minister whether he was aware that it was not possible to obtain an accurate estimate of deficiencies in the eyesight of children, except with the aid of a drug, which was used to dilate the pupil; whether he was aware that no opticians were allowed to employ this drug; and whether he would consult the medical officer of his Department to ascertain if it was desirable that parents should be supplied with the addresses of opticians when they could take their children to a hospital or to a medical man.

Captain Toombs remarked, in regard to Dr. Arthur's statement, that no optician was allowed to inject a chemical into the eye in order to dilate the pupil, that the Union Steamship Company's oculist, who examined and tested the

eyesight of the company's officers, always did this, and that the officers had protested against this time and again.

The Minister of Education, Mr. Arthur Griffith, replied that he did not know that it was impossible to gauge defects in eyesight without the injection of chemicals into the eye. He was under the impression that a skilled and qualified optician, with the aid of his apparatus, could ascertain defects, but he would consult Dr. C. S. Willis, the medical officer of the Department, on the subject.

### STATE CHILDREN'S DEPARTMENT, SOUTH AUSTRALIA.

The report of the Council of the State Children's Department of South Australia for the year ending June 30, 1915, has been forwarded to the Chief Secretary, Dr. C. W. Hamilton, who has acted as President during the year. The number of children under control on June 30, 1914, was 1609. During the year there were 328 new committals, and 202 discharges, including deaths, leaving the number of children under State control on June 30, 1915, as 1735. Of these children, 936 were boys and 788 girls. The number of children in the State placed out in homes and in service was 1400. There were 8 children out of the State with their guardians, and 30 children absconders at large. The remainder were in schools and institutions. Twenty weak-minded children were in the Minda Home. Ninety-eight children were confined to the reformatories. A study of the reasons assigned for the new committals shows that 36 children were committed as uncontrollable, and 65 as neglected by parents or guardian. The children convicted of offences, most frequently larceny, numbered 85, and the illegitimate children 56. The destitute innocent children numbered 87. The hardships occasioned by the war have caused a diminution of the number of applications for servants from 245 to 150, and an increase in the number of offers of subsidized homes from 145 to 157. During the year 742 children passed through the Industrial Home. The produce of the garden was valued at £184. A well was sunk by the boys, who carted the water from it during the summer drought, and saved the garden from desiccation. The reformatories have been successfully conducted during the year, and the manager has done excellent work in producing habits of industry. There were 11 deaths among the 1927 children under the Council's control during the year. Among 55 infants under one year of age, four died, giving a mortality of 7.2%; of 1816 children over 2 years of age, seven died, yielding a mortality of 0.38%. There were no deaths among the 66 children between 1 and 2 years old. In addition to the children under the control of the Council there are 2097 children who are supervised by the Department for various reasons. Among these children there were 49 deaths. There were 43 deaths among 700 children under one year, giving a mortality of 7.2%. Out of the 60 deaths, 39, or roughly two-thirds, were due to intestinal disorders. There was only one death due to the infectious fevers. Four deaths were caused by meningitis. There was one death from tetanus and one death due to accident.

The Council exercises control over the lying-in homes of the State. There were 214 maternity homes under supervision during the year, and the total number of cases in these homes was 3,121. Twenty-five homes were closed, so that 189 homes were under supervision at the date of this report. Over 1000 visits of inspection were paid during the year by the four inspectors. Short written reports were made of each visit. Of these reports 300 were excellent, 500 were good, and 200 were less satisfactory. When the report was quite unsatisfactory a letter of warning was sent to the nurse in charge, and time was granted to make improvements. In all cases these improvements were carried out to the Council's satisfaction. This is regarded as the most encouraging part of the Council's work. The expenditure has amounted to £28,415, being an increase of £2,416 on the expenditure of the previous year. This has been caused by the rise in the cost of living. The children's wages fund was augmented by £2,191 during the year, and now stands at £11,854.

The Council can be congratulated on the results of its supervision of one of the most useful pieces of work performed in the State.



## The Medical Journal of Australia.

SATURDAY, NOVEMBER 20, 1915.

### Typhoid Immunization.

Reports continue to filter through from the front and from England of the existence of cases of enteric fever among the troops, including the Australian troops, in Egypt and the Mediterranean. We have expressed the opinion that the diagnosis in these cases may be at fault. It is often impossible to differentiate enteric fever from paratyphoid from the clinical manifestations, although the latter is a less fatal disease. But while the probability exists that enteric fever is comparatively rare at the front, every precaution should be adopted to lessen its incidence or to prevent it altogether. In the Melbourne discussion on cerebro-spinal fever, Dr. R. J. Bull argued against the practice of anti-typhoid vaccination as a prophylactic measure, on the ground that the number of carriers might be increased, and, consequently, the sources of infection rendered more numerous. He accepted the proposition that vaccination of soldiers should be employed under the circumstances of war. If it can be shown that anti-typhoid inoculation is capable of inducing a definite degree of immunity, its universal application would result in a very marked reduction of the disease in the protected community. Should any cases occur in the area, notwithstanding this protection, it would be feasible to trace the source of the infection and to deal with the carrier of the infective agent. It appears therefore that general anti-typhoid vaccination should prove of immeasurable value in the stamping out of enteric fever, and this could be applied simultaneously with an efficient control of sanitation. The question depends on the capability of the vaccine to increase immunity.

In order to arrive at a satisfactory conclusion in this regard, two aspects of the subject must be examined. In the first place, it is essential to ascertain what evidence there is of the production of antibodies as a result of the introduction of typhoid

bacilli, and in the second a comparison should be drawn between the various results obtained from different methods of inoculation and from different forms of vaccine.

The public judge the effect of a prophylactic solely from the end result of its application. If the incidence and mortality are markedly reduced, the public is satisfied that the protection is good. Scientists require further evidence. Immunity may be a positive or a negative phenomenon. In the case of natural immunity, no antibodies are required. None are present in the tissues or body fluids of the race. In acquired immunity, whether this be the result of a previous attack of the disease, or of a process of artificial immunization, immune bodies are produced and can be measured with accuracy, at all events in so far as some of them are concerned. In the case of enteric fever, the agglutinins, bacteriolysins and possibly opsonins may be taken into consideration. The great variation in the estimations of the opsonic index in the hands of different observers and under different conditions renders this means of ascertaining the degree of immunity induced by anti-typhoid vaccination unsuitable. Bacteriolysins have been measured for this purpose, but these bodies are probably less reliable than agglutinins. In the rabbit, the maximum immunity is found to follow soon after the sixth injection of the vaccine, and is then considerably more marked than after the fifth. This subject was carefully analysed about ten years ago. It was shown that the agglutination titre, as determined by the quantitative Widal test before inoculation varied to a slight extent. The first injection produced little or no effect on the titre. The results of the readings of the opsonic index suggested the occurrence of a negative phase following the injection. No trace of this negative phase is detected by the Widal test. The violence of the reaction appears to depend on the dose employed. By dose must be understood the amount of the active bacterial substance, and not the number of cubic centimetres of emulsion. It has been shown that the immunizing power of an emulsion diminishes in the course of time, and that various preparations differ considerably from each other in this respect. Massive doses give a good reaction and the optimum effect, in as far as the pro-

duction of agglutinin is concerned, follows if the second dose be given after an interval of ten days. The reaction following the second dose of twice the size of the first is less, but the effect on the agglutination titre is greater. After about 24 hours, agglutination is detected when a more dilute serum is used than was used before. If the titre was 1 in 30 before the second injection, it may rise to 1 in 60 within 24 hours, and then by gradual stages to 1 in 1000 within the week. At this stage, some reduction takes place. The third injection is usually carried out when the titre is rising again, and the result of the Widal test a few days after the third injection is often 1 in 4000. The index of immunity is represented by the increase in the dilution titre from the start to the finish. The protection afforded by vaccinating would be greater in a man whose serum agglutinated *bacillus typhosus* in a dilution of 1 in 20 before the inoculation, and in a dilution of 1 in 2000 after, than in a man whose serum before the vaccination agglutinated in a dilution of 1 in 100 and after in 1 in 2000. Moreover, the degree of immunity should be gauged by a number of readings after the last injection and not by the maximum power of the serum at any given time to agglutinate typhoid bacilli. It is therefore more advisable to plot the results in curves than to record the results in figures. A typical vaccination curve, having the days in the ordinate and the dilution of the serum in the abscissa, should show but little tendency to rise during the first ten days, and should then show a steep upward line with small notches in the periods following the second and third injections. A full week after the last injection the curve should follow a more or less straight line at a very high level.

Major W. S. Harrison published in 1907 the records of a series of highly important experiments connected with the bactericidal action, the "stimulin" action, and the agglutinating power of the serum of rabbits immunized with *bacillus typhosus* killed by heat at 65° C., at 60° C. and 53° C. and by chloroform. It is peculiarly interesting to note that the increase in immunity, as measured by the bactericidal action, was approximately the same with all four forms of vaccine. When the stimulin test was employed, it appeared that the bacilli killed by chloroform gave a somewhat better result than

when they were killed by heat. On the other hand, the agglutination power was less marked after inoculation with bacilli killed by chloroform. The greatest increase was recorded after protection with bacilli killed at 60° C. It appears, however, that the observations were broken off too early, and that the maximum effect was not shown in the curves. Nevertheless, these experiments show clearly that the manner of preparation is of importance in the end result.

In regard to dose, it should be pointed out that the British Army order provides for an initial dose of 500 millions, followed by a second dose of 1000 millions bacteria, after an interval of ten days. The vaccine used is prepared by Wright's method, young broth cultures being employed and killed at 60° C. and a trace of phenol or lysol being added after the emulsion is cold. Courment and Rochaix recommend bacilli killed at 53° C., the cultures being on gelatine. A few drops of tincture of opium are added to the emulsion. The emulsions are mixed in bouillon and injected three times into the rectum. Chantemesse uses gelatine cultures and kills the bacilli by heating to 56° C. for 45 minutes. A small quantity of trinesol is added to the emulsion. He gives four injections, beginning with 250 millions and working up to 1000 millions. The injections are subcutaneous, and the interval eight days. Pfeiffer and Kolle use 24 hours old cultures on gelatine killed at 60° C. for one hour. They add 3% carbolic acid. One c.cm. corresponds to 4 mgrs. of fresh culture. They give three injections, the first dose is 0.5 c.cm. and the second and third 1 c.cm. Russell gives 5000 millions bacilli, followed by double this dose after 10 days, and the same after a further ten days. Vincent uses an autolysate and a bacillary vaccine. The former is the product of bacilli macerated in physiological saline solution for two days, and then treated with ether for a similar period. The bacillary vaccine represents macerated bacilli, the dose being 200 millions, increased at intervals of from seven to ten days to 1000 millions. Renault injects bacilli which have been exposed to ultra-violet rays. Besredka gives sensitized living bacilli in two injections, the dose of the first being 500 millions and that of the second 1000 millions. Nicolle has suggested giving two intravenous injections of living

Eberth's bacilli. All these methods are capable of inducing an increased immunity, as revealed by the bactericidal and agglutination tests. It is probable that the immunizing power of living bacilli is greater than that of killed bacilli. Leishman, however, has doubted the expediency of employing this form of vaccine on a large scale at present. The experience of the Pasteur Institute tends to show that it is quite safe to employ sensitized living bacilli.

A consideration of the foregoing facts would suggest that large doses of a carefully prepared vaccine, which has not been subjected to a heat greater than 60° C. for one hour, and which has not been kept for any considerable length of time, should be employed. In the next place, three injections of increasing doses should be given at intervals of not less than ten days. And, lastly, the effect of the inoculations should be controlled from time to time by the application of the Widal test. In conducting this test, the dilution of the serum at which agglutination occurs should be determined before the vaccinations are begun, and the tests should be repeated at short intervals until about a fortnight after the last injection.

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#### THE RED CROSS.

In another column will be found a short review of the first year's work of the Australian Branch of the British Red Cross Society. Prior to the outbreak of war, this organization was represented by a branch in New South Wales, which had been founded in 1913, and which had led a passive existence up to August, 1914. The actual activity of the Red Cross Society within the Commonwealth was awakened by the greatest tragedy of all times. This fact, taken together with the amount and kind of work achieved during the year, speak volumes for the magnificent enterprise and extraordinary resourcefulness of those singleminded ladies and gentlemen who are responsible for the movement.

No tragic event has yet been recorded in history that is completely devoid of some good feature. No night is so dark but that the eye can discern some indications among the dark shadows of the morning which must inevitably follow. No individual is so tainted but that at one time or another some channel existed through which his better instincts could be

reached. Even the war, ghastly and irresponsible as it is, has some redeeming aspects. The events of the past months have shown to the world that Australia's sons are prepared to face danger and death without a murmur and without flinching, when the nation's safety is at stake. Those whose duties in the field are directed toward the preservation of life, as contrasted with the life-destroying nature of the combatant's work, have carried out their heavy tasks in a manner worthy of the best traditions of the great Empire which rules the greater part of the world. But not only at the front are the better qualities of men and women brought to light by that most horrible of all things—war. At home the army of voluntary workers have erected for themselves a monument which will prove indestructible. They have undertaken a work of love without preparation, and practically without previous experience, and have brought immeasurable relief and comfort to the brave boys struggling with a powerful and ruthless enemy across the seas. To Her Excellency Lady Helen Munro Ferguson, to the wives of the six State Governors, and to the host of Red Cross workers the gratitude of the nation is due. This debt must be honoured, even if it can never be paid in full. The record of the Australian Branch of the British Red Cross Society for the year just ended is a record to be proud of. We are convinced that the nation can rely on a continuation of this truly splendid endeavour.

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#### THE LOST TRANSPORT MARQUETTE.

Some details of the foundering of the transport *Marquette*, which was torpedoed and sunk in the Aegean Sea on October 23, 1915, are available. It appears that the staff of the No. 1 New Zealand Stationary Hospital, which was told off for duty at Port Said, was embarked on board the transport. The majority of the nurses came from Dunedin and Christchurch, although a few from Wellington were also on board. It has been reported that there were also some of the nurses attached to the hospital ship. A few of these nurses are reported missing. In all, it is feared that ten nurses and twenty-two men have lost their lives. Among the names of the saved is that of Colonel McGavin, a well known Wellington practitioner, and those of Majors D. S. Wylie and H. T. D. Acland. As far as is known, no medical practitioners are among the missing. The brave women who have lost their lives in an act of war, ruthless and horrible in the extreme, were well trained nurses, with their hearts in their work. Their



heroism is equal to that of the men who fall in the field or who lose their lives in a naval engagement. Of those saved, one, Matron M. O. Cameron, of Christchurch, is reported to be seriously ill. Matron Cameron was trained at the Women's Hospital, Melbourne, and spent two years at the Waikato Sanatorium before being appointed Matron of the St. Helen's Hospital, Christchurch. Nurse Wright is also reported to be saved, but ill.

A statement was made in the New Zealand House on November 3, 1915, by the Hon. G. W. Russell, to the effect that the War Office had asked the Government for 100 additional nurses, and that a further 35 would be required for the hospital ships. The *Marama*, the sister ship of the *Maheno*, which has been equipped as one of the finest hospital ships afloat by the people of New Zealand, is about to be commissioned. When the *Maheno* returns she will be re-commissioned, and her complement of nurses will be provided. The Government was in a position to send other nurses to take the place of those drowned, should this become necessary. The readiness with which New Zealand is supplying nurses and medical practitioners speaks well for the organization of these two professions.

#### STATE HEALTH ADMINISTRATION.

For a considerable time it has been recognized that the Health Act of Victoria is a cumbersome piece of legislation, and that its provisions hamper the Department in carrying out the measures necessary for the safeguarding of the public health. The anomalies of the Act have recently been remarked on by Mr. Justice Cussen. Especial difficulty has been experienced in regard to the adoption of the measures required for controlling the spread of epidemic cerebro-spinal meningitis. It is reported that the Government is now considering the amendment of the law relating to public health. The new Minister has taken the wise course of consulting the medical profession before any definite shape is given to the proposals. The Commission appointed to consider the best means of coping with the epidemic has been asked to draw up a reference for submission to the Crown Solicitor, in order that the recommendations, in so far as they are considered to be advisable and practicable, could be embodied in the amending Bill. Whether a disease like cerebro-spinal meningitis can be controlled satisfactorily by legislative provisions or not is a moot question, but there is no doubt that the attention which the medical commission is giving to this subject will result in the formulation of the best methods for dealing with the epidemic should it recur after the summer months have passed. There are indications that the present outbreak is on the wane.

#### THE TRAINING OF THE INCAPACITATED.

The Federal Parliamentary War Committee, at a meeting held on November 11, 1915, considered a suggestion that the organization undertaking the training of soldiers incapacitated through injury or illness at the front should extend its activity to include civilians who are suffering from a similar disability. The Committee determined against this sug-

gestion, on the ground that its reference was limited to the care of invalided soldiers. In the accounts published in the daily press, it was stated that this suggestion had its origin in the New South Wales Branch of the British Medical Association. The matter, however, is somewhat different. A short time ago a medical man practising in Sydney called the attention of the Branch to the fact that a large number of persons whom he had examined in connexion with the Old-age and Invalidity Pension scheme could be usefully employed if trained in a special direction. The Council of the Branch recognized that under the scheme of the Federal Parliamentary War Committee, persons other than soldiers could not be included. It was felt, however, that from an economic and humanitarian point of view, the extension of the scheme to include civilians would be distinctly advantageous. The Secretary to the Federal Treasury was therefore communicated with, and, in due course, the Branch was informed that the matter had been referred to the Department of Defence for consideration.

The suggestion is undoubtedly an excellent one, but the difficulties attending its application appear to be considerable, at all events at present. We understand that the preliminary work of the State War Councils and the State Medical War Committees is proceeding satisfactorily. Some time must elapse before these Committees will be in smooth working order. When the scheme has been in existence for a little time, it will be possible to judge whether an extension would be desirable or advantageous. At present, the energies of the Committees must be concentrated on the endeavour to enable invalided soldiers to earn a livelihood. No doubt the Minister of Trades and Customs will keep this matter in mind, and should the machinery provided for the soldiers prove efficient, similar means could be adopted for civilians.

#### THE CARE OF MENTAL DEFECTIVES.

The Inspector-General of Hospitals of South Australia has issued the first annual report dealing with the mental hospital at Parkside, and with certified mental defectives, for the year ending December 31, 1914. The work carried out during the year has been based on the new Mental Defectives Act of 1913. The Inspector-General outlines two alternative schemes for carrying out of this Act in so far as they relate to the institutional care of mental defectives. He urges an increase in the accommodation. At the time when the report was drawn up, there were 14 beds for males and 21 for females unoccupied. Many of these beds had to be kept vacant because the occupants were absent on leave. He calls attention to the fact that the discharges from a mental hospital are far lower than those from a general hospital. The majority of unrecovered cases remain in the mental hospital until removed by death, whereas incurables are discharged after a short stay in a general hospital. He claims sufficient accommodation for all persons suffering from mental disorders in an institution, the objects of which are as follows: First, to promote recovery where possible; secondly, to secure observation and control of patients; and, thirdly, to provide as much comfort as possible. To attain these objects it is necessary, among other things, that the buildings should be designed in a suitable manner, and should contain roomy, bright, well-lighted, and well-ventilated wards. Further, he points out that environments and occupations are important factors in the treatment of mental conditions. In order that the out-door occupation could be provided, it

would be necessary to acquire more land than was available at Parkside.

The Inspector-General holds the opinion that it is a radical defect in the system that persons suffering from mental affections do not receive any specialized treatment until they are certified. He therefore advocates the establishment of receiving wards at general hospitals. He also pleads for the separate treatment of mentally defective children.

The schemes put forward are as follows:—

**Scheme 1.**—Receiving wards for male and for female patients should be established at the Adelaide General Hospital and at two or three country hospitals. They should be properly equipped for that purpose. A receiving house and accommodation for ten males and five female patients and the necessary staff should be erected in a central situation, and provision should be made for future expansion. An up-to-date mental hospital, to accommodate 1,500 patients should be built within a reasonable distance of Adelaide. This hospital should stand in 800 acres of agricultural land. Cottages should be built for the married attendants, in addition to the residences of the members of the administrative staff. The building at Parkside should be remodelled and put into use as a mental hospital for acute cases. It is estimated that the new hospital would cost £300 per bed.

**Scheme 2.**—In this scheme the establishment of receiving wards and a receiving house should be the same as under scheme 1. Instead of building a new hospital, the buildings at Parkside should be remodelled and brought up to date, while the nucleus of a new mental hospital should be commenced on an area of land of about 400 to 500 acres. The administrative block, a block for male patients, and one for female patients, as well as the necessary offices and farm buildings, should be started at once. Some of the able-bodied patients suffering from chronic illness could be transferred to the new institution, in order that their labour might be utilized for the production of agricultural products.

In summarizing the year's work, the Inspector-General points out that the only cases of notifiable infectious disease were one of enteric fever, and two of pulmonary tuberculosis. No patients escaped, but one male and one female committed suicide.

In the report from the Parkside Mental Hospital itself, the Acting Medical Superintendent makes a further appeal for increased accommodation. On the last day of 1913 there were 1,082 patients in the hospital. During the course of the year, 284 patients were admitted, 23 of whom were returned after trial leave. The total was therefore 1,366. Of these, 156 were discharged, 148 having recovered. In addition, 130 patients died. Two tables are given setting forth the admissions, discharges and deaths, and the mean annual mortality for each year since 1846. It appears that 10,498 persons were admitted into the hospital during 69 years. Of these, 57.15% were discharged. The number of persons dying during the period was 3,418, which is equivalent to a mortality rate of 34.56%. Patients who were readmitted on account of relapses formed 15.79% of the total number.

An interesting table is given, dealing with the ratio of mental defectives to the total population in England, Western Australia, South Australia, Victoria, New South Wales and Queensland. In 1877, 2.69 persons per 1,000 of the English population were under certification. The proportion in South Australia in the same year was 2.01, while it was 3.15 in Victoria, and 2.84 in New South Wales. In Queensland, it was only 2.05. The frequency of insanity appears to have increased steadily in England from 1877 to 1912, when it was 3.75 per 1,000. In Western Australia, 1.47 persons to each 1,000 of population were certified as insane in 1894. The ratio increased steadily, until it was 3.03 in 1914. In South Australia some increase took place up to the second half of the 'eighties. Since then the incidence of insanity appears to have been almost stationary. In 1900 the ratio was 2.67, and in 1914 it was 2.45. In Victoria, the ratio varied during the period 1877 to 1896 between 3.15 and 3.59. In 1897 it was 3.67, in 1906 it was 3.99, and since that date it has been just over 4 per 1,000. In New South Wales the incidence remained below 3 until the year 1895. Since

this date it has risen to 3.72 by a gradual increase. The increase in Queensland has been fairly consistent, but not rapid. In 1914 it was 3.61.

Of the 261 persons admitted as fresh patients during the year, 4 were suffering from congenital forms of mental disease. The attack was a first attack in 133 cases, and a second or subsequent attack in 86 cases. It was unknown whether a previous attack had occurred in 38.

The duration of the illness in the cases of first attack was less than two weeks in 28, was between two and four weeks in 27, was between one and three months in 24, was between three and six months in 15, was between nine and twelve months in 4, was between one year and 1½ in 6, was between two and three years in 4, and was three years and more in 6.

The form of mental disorder is dealt with in a separate table. Sixty-eight of the first attack cases were suffering from manic depressive insanity, while 44 of the other patients were suffering from the same form. Eighteen of the first attack cases, 13 of the subsequent attack cases, and 8 of the doubtful cases were forms of delusional insanity. There were 31 cases of senile dementia, 24 of dementia from coarse brain lesions, 15 of toxic and confusional insanity, 10 of epileptic insanity, and 6 of general paralysis of the insane. There were three cases of congenital mental deficiency without epilepsy, two with epilepsy, and one case of volitional and moral insanity.

In regard to the ætiological factors and associated conditions, heredity is said to have played a part in 33 cases, critical periods in 46 cases, child-bearing in 8, mental stress in 49, alcohol in 16, syphilis in 4, lead-poisoning in 3, trauma in 12, epilepsy and brain lesions in 10, and malnutrition in 1. An analysis is appended dealing with the cases of patients discharged during the year.

The causes of death are given in a separate table. In 21 cases cardiac disease is mentioned as the primary cause, in 23 senile decay, in 16 organic diseases of the brain, in 9 general paralysis of the insane, in the same number pneumonia, and in the same number again pulmonary disease, in 7 apoplexy, in 7 bronchitis, in 6 diarrhoea, in 6 colitis, in 3 epilepsy, in 3 melancholic exhaustion, etc.

The expenditure during the year amounted to £39,458, including nearly £20,000 on medical comforts, provisions, etc., nearly £17,000 on salaries and allowances, £1,500 on fuel, £735 on water, and £317 on medicines. The expenditure has increased steadily during the past ten years. In 1905 it was £26,266. The daily average cost per patient for the year 1914 worked out at 1s. 11.6d. In 1905 it was 1s. 6d. During the following five years the expenditure was only increased to a slight extent. During the years 1912 and 1913 it gradually rose to its present figure. The daily average cost for each patient, after deducting the fees paid for maintenance, worked out 1s. 7.75d. in 1914.

#### THE MEDICAL PRACTITIONERS ACT, NEW ZEALAND.

In reply to a question asked in Parliament by Mr. R. Fletcher, the Minister for Public Health stated that he did not propose to introduce an amending clause to the New Zealand Medical Practitioners Act to the effect that any applicant for registration should have a right to become registered after having passed the prescribed examination. He pointed out that ample power existed for any qualified person to appeal to the Supreme Court should registration be refused them.

The Minister was also asked to insert a clause rendering it a penal offence for a medical practitioner to refuse to meet another practitioner in consultation. Mr. Fletcher had suggested that the members of the British Medical Association were formed into a union, and refused to meet in consultation medical men who were not members of the Association. The Minister gave it as his opinion that no medical practitioner was justified in refusing to meet another practitioner in consultation provided that a reasonable fee were tendered. Medical men enjoyed the protection of the law, and their services should be available to the public under all reasonable circumstances. He would consider the advisability of dealing with this matter next session.

## Abstracts from Current Medical Literature.

### SURGERY.

#### (180) Gastric Ulcer.

W. J. Mayo (*Journ. American Med. Assoc.*, September 25, 1915) points out that ulcer of the stomach is a more serious condition than ulcer of the duodenum, but it is fortunately a less frequent one. The resulting deformities are more extensive, and interfere with gastric digestion and motility. The mechanical condition can be relieved by operation, but not so the physiological function. Acute perforation is more common in ulcer of the stomach than in ulcer of the duodenum. The gastric contents are larger, and consequently septic peritonitis is more likely to result from a perforation. Hæmorrhage occurs in both with about the same degree of frequency, but in gastric ulcer it may be gastrototoxic. The danger of cancer developing in gastric ulcer is great, while it is remote in the case of duodenal ulcer. He also points out that the operative procedures carried out for the relief of gastric ulcer have a greater mortality than those performed for duodenal ulcer. In turning to the question of malignancy he quotes various authors in support of the contention that this result is common. In von Eiselsberg's patients, 32% of all deaths following operation for gastric ulcer were due to gastric cancer. He shows that in a number of cases medical treatment fails to produce actual healing of the ulcer. In civilized man 30% of all cancers are situated in the stomach. He suggests that this may be due to the fact that drinks are taken very hot or very cold; primitive men and animals do not take their drinks hot or very cold, and seldom have gastric cancer. He lays stress on the site, size and relations of gastric ulcer. Ulcer of the pylorus should not be mistaken for duodenal ulcer. When it occurs in the terminal 1½ inches, it is prone to develop a tumour, which, with œdema and obstruction, may lead to the mistaken diagnosis of carcinoma. He recalls cases in which a gastro-enterostomy was performed for an assumed cancer of the stomach, and in which the tumour disappeared. The greater the amount of œdema the more extensive the adhesion, and the firmer the fixation, the greater the probability that the condition is simple ulcer. The glands are enlarged in both, and in some cases of malignant disease the enlargement may be inflammatory. After referring to the importance of a proper recognition of the distribution of the pyloric veins, he claims that Rodman's operation of pylorotomy and partial gastrectomy removes the cancer liability, and incidentally the formation of jejunal ulcer, a rare condition. Rodman's operation should be reserved for pa-

tients whose physical condition admits of a severe operation, and in whom the development of cancer is a probability. In regard to ulcer of the lesser curvature and antrum he shows that simple excision without gastro-enterostomy may fail to effect a cure. He has lost two patients after excision from continuous hæmorrhage, and therefore advocates the use of the actual cautery to destroy the ulcer. For large ulcers of the body of the stomach he recommends sleeve resection of the segment, including the ulcer, and end-to-end anastomosis of the two fragments. If the ulcer is not too large his transgastric operation will be found satisfactory.

#### (181) Treatment of Gunshot Wounds by Excision and Primary Suture.

H. M. W. Gray adopted the treatment of gunshot wounds by excision and primary suture in certain lacerated furrow wounds in November, 1914, and, having been highly satisfied with the results, has extended this treatment very considerably (*Journ. Army Medical Corps*, June, 1915). The advantages claimed for the method are:—(1) Healing by first intention is assured in the majority of cases, (2) much time is saved, and the soldier is available for duty at an earlier date, (3) the amount of attention required is greatly reduced, (4) much pain is avoided, (5) the amount of dressing is reduced, (6) complications are avoided, (7) a more sightly scar is obtained, (8) less impairment of function is produced owing to the fact that contraction is absent, (9) in the case of head injury co-existing lesions of the skull and brain can be detected at the operation. He points out that drainage is only required when the wound is deep, and then only for a short period. Very long wounds can be dealt with in this manner. It is not necessary to wait until the wound is surgically clean. The sooner the excision is performed the better. By vigorous "salting" wounds may be rendered suitable for excision in 24 to 48 hours. The operation is performed under infiltration anaesthesia. The surrounding skin is shaved and disinfected, and the wound wiped out, dried, and packed with gauze. The whole wound, including the skin, flesh, and if necessary bone, is cut away *en masse* at a distance of about ½ to ¾ inch from the raw surface. The suture is carried out in layers. The line of suture and the adjacent skin is painted with a mastic varnish, and as soon as this has become sticky layers of gauze are applied.

#### (182) The Treatment of Fractures.

G. P. Newbolt (*Liverpool Medical-Chirurgical Journ.*, July, 1915) deals at some length with the subject of plating and wiring fractures. He admits that an ideal condition would be obtained if all fractures were plated. It is, however impossible to carry this out at present. Excellent results were obtained thirty years ago with iron

splints. It used to be taught that pressure applied to the fracture would cause trouble. R. Jones' practice in the treatment of fractured clavicle was to apply a pad of paper, plaster and wool directly to the broken part. The results were said to be good. Newbolt discusses the advantage of division of the *tendo Achillis* in Pot's fracture. In regard to oblique fracture of the tibia and fibula, wiring to keep the broken ends in apposition was not altogether satisfactory. It took longer than plating. The staple was tried, but proved to be unreliable. Better results were obtained with the screw provided it was not too long, and that the thread was continued up to the head. For ununited fractures a strip of bone was cut longitudinally from the tibia, and applied to a groove in the fractured bone. This graft was fixed with bone nails. The chief disadvantage of the method is the expense of the electric saw necessary for cutting the graft. Fractures of the patella should be operated on as soon as possible. Immediate operation is easier than delayed operation, and saves the patient pain. The author advocates wiring the bone straight through posteriorly. Fracture of the olecranon is treated by a straight splint. Newbolt prefers to wire the bone than to fix the fragments with a nail. After dealing with several other forms of fracture, he concludes that the time is not yet ripe for plating or wiring all fractures. Until more experience has been gained, and the public has been educated to the importance of the operative treatment of fractures, reliance must be placed on suitable splints.

#### (183) Myositis Ossificans.

O. M. Shere records the case of a man who received a blow on his right thigh (*Journ. American Med. Assoc.*, September 18, 1915). The next day there was considerable swelling, and ecchymosis as well as pain on moving. Hot fomentations were applied, and the swelling and bruising disappeared, but the pain persisted. Three weeks later a fusiform swelling was found on the external aspect of the middle third of the thigh. The swelling was tender on palpation. Flexion of the knee beyond one-fourth of the normal range caused severe pain. The skiagram revealed a slightly irregular area of the bony structure of femur. An exploratory operation was undertaken. The diagnosis rested between periosteal sarcoma and *myositis ossificans*. Masses of bony deposit were met with in the *vastus externus*, and the external and anterior surface of the femur was found to be covered by cancellous bony deposit. The deposit was removed by means of a blunt curette, and the bony deposits in the muscle excised. The pathological condition corresponded to myositis ossificans. Islands and beams of bone, surrounded by connective tissue, with occasional spindle-shaped cells, constituted the changes. The spindle-shaped cells were similar to fibroblasts. The author discusses the



pathology of this traumatic form of myositis ossificans, and comes to the conclusion that a closed injury to bony structure in a healthy individual of sufficient severity to cause a proliferation of osteoblasts may result in a bony deposit in the neighbouring tissues, provided that the osteoblasts do not encounter any resisting structure to check their distribution.

#### OBSTETRICS AND GYNÆCOLOGY.

##### (184) The Cause of Tubal Pregnancy.

Mall (*Surg., Gynaec. and Obstet.*, September, 1915) gives his views on the cause of tubal pregnancy, and the fate of the enclosed ovum, based upon a thorough study of 117 specimens of tubal pregnancy which had been collected during 17 years. He promises that a detailed account of these specimens will be presented in an illustrated monograph (No. 211), to be published by the Carnegie Institution of Washington. He states that a review of his specimens shows quite definitely that tubal pregnancy is associated with inflammatory changes which must have preceded the lodgement of the ovum in the uterine tube. Under normal conditions, the tube is lined with a layer of ciliated epithelium, which constantly works in the direction of the uterus, and therefore carries in the tube a stream of fluid from the ovaries to the uterus. The fertilized ovum gets caught up by this stream, and if the conditions are normal, it is carried into the uterus. Any change which delays the ovum in its progress will favour tubal pregnancy. He cites several anomalous cases, such as abnormal diverticula, duplicate tubes, etc., which might easily be, and have proved to be, the cause of tubal pregnancy. In his own series he found that it was much more commonly associated with a chronic inflammation, followed by adhesions and kinking of the tube. Further, he agrees with other authorities that it is while the precedent inflammatory condition is gradually subsiding that tubal pregnancy takes place. Such an inflammatory process is signaled not only by an inflammatory reaction in the tube wall, but also by very pronounced changes within the tube lumen. The most common is a condition of follicular salpingitis. The tubal folds hypertrophy, their tips become adherent. While this process is at its height it is clear that an ovum cannot pass through the tube, and much less can the spermatozoon pass outward to reach the ovum. This stage corresponds to the period of sterility, which usually precedes the occurrence of ectopic gestation. It is only after this follicular salpingitis has abated somewhat that it is possible to have conditions suitable for the production of a tubal pregnancy. Another type of change may occur within the lumen of the tube, which, although differing from follicular salpingitis, seems to go hand in hand with it. This condition, he states, may be spoken of

as out-pocketing of the epithelial lining. Here the muscular wall is thick and fibrous, and numerous, small diverticula reach out into the muscular coat. In other of his specimens they seemed to run in parallel lines, indicating that, instead of a single lumen, there were numerous small lumina side by side. Either of these two conditions might account for the arrest of the ovum. The ovum is taken up by the mucous membrane of the outer end of the tube, and, owing to the impairment of the ciliated epithelium, is delayed in progress. On account of this delay it becomes too large to be carried through the narrow portion of the tube into the uterus. This condition is aggravated when the tube lumen is greatly reduced at the uterine end. He next indicates the factors determining the site of implantation, inner, outer and middle. He does not enter into the nature of the inflammation, but indicates that it is more often the result of gonorrhoea than of a previous puerperal infection. He also studies in detail his specimens in three main groups: (1) Tubal pregnancies containing normal ova, (2) tubal pregnancies containing pathological embryos, and (3) tubal pregnancies containing pathological ova.

##### (185) Menstrual Reaction and Menstruation.

Novak (*Surg., Gynaec. and Obstet.*, September, 1915) gives an account of his histological studies on the relation between the degree of menstrual reaction in the endometrium and the clinical character of menstruation. Firstly, he records briefly the work of Hitschmann and Adler, which demonstrates quite clearly that the uterine mucosa undergoes a cyclical, histological change, which corresponds to the clinical cycle of menstruation. This developmental cycle in the endometrium they divide into four stages, as follows: (1) The post-menstrual stage, the few days immediately following menstruation, in which the glands of the endometrium are narrow, collapsed, and straight, while the stroma is rather firm and compact. (2) The interval stage, during which the endometrium is undergoing gradual development, the glands becoming fuller and exhibiting increasing consolidation. The stroma still is quite compact in appearance. (3) The pre-menstrual stage, displaying hypertrophic development. The lumina of the glands become much increased, the epithelium undergoes mucoid change, the stroma cells participating in the general process of development. (4) The menstrual stage, showing great increase in the vascular phenomena, with the glands and stroma in a transitional stage. All gradations of glandular and stromal hypertrophy are to be found in the study of the pre-menstrual stage, and the question arises as to whether differences in the local hypertrophy has any relation to the well known differences existing in women with regard to the clinical character of menstruation, and, further, as to whether women

who menstruate profusely exhibit a greater degree of local hypertrophic change than women who menstruate very scantily. For purposes of study, he selected only those cases in which an accurate menstrual history was obtained, so that he could be reasonably certain of being able to make comparisons between specimens representing the same day of the menstrual cycle. For the same reason he accepted only those (159) which displayed regular periodicity. He points out the importance of securing sufficient endometrium for examination, as different areas might display widely dissimilar microscopical pictures. He lays more stress on the importance of the granular than stromal appearance. He gives a detailed statement of the microscopic findings in each group of cases, collectively, and as far as possible, individually, where noteworthy differences exist between cases in the same chronological group. He concludes from a careful study of these specimens that the general principle enunciated by Hitschman and Adler is quite correct, except that the pre-menstrual change is not in the nature of a rather sudden flare-up, beginning from a few days to a week or more before the beginning of the next menstrual period, but that the developmental process is a very gradual one from one menstrual period to another, and that there is no sharp dividing line between the interval and pre-menstrual stages, any more than there is a sharp transition between the post-menstrual and the interval phases. He discovered, further, wide individual differences in the degree of pre-menstrual glandular hypertrophy, and the degree of mucoid change in the epithelial cells. The changes in the stroma were much less constant and much less striking than those in the glands. From a careful analysis of his cases, he is led to believe that the greater the clinical intensity of menstruation, the greater the local reaction in the endometrium, as manifested by hypertrophic changes in the glands, and to a less extent in the stroma. Speaking generally, the more profuse the menstrual flow, the more marked the hypertrophic changes. The less abundant the flow the less striking the local reaction in the endometrium. An important exception to the above generalization was encountered in cases of antelexion of what is commonly spoken of as the congenital type. In these cases it was noticed that the earliest awakening of the glands occurred, and that the pre-menstrual hypertrophy was last to reach fullest development. This was remarkable, in view of the fact that in many of these cases of antelexion in young women associated with dysmenorrhoea and usually sterility, menstruation was scanty rather than profuse. This fact would indicate that the ovary, the activity of which appears to govern the degree of hyperæmia and of consequent endometrial hypertrophy, is not functionally deficient in such cases as has so often been stated.

## British Medical Association News.

### MEDICO-POLITICAL.

A meeting of the Council of the Victorian Branch was held at the Medical Society Hall, East Melbourne, on November 11, 1915. Dr. Honman, the President, in the chair. The President reported that representatives of the metropolitan hospitals and of the Council had waited on the Premier with regard to separate accommodation of patients suffering from infectious diseases. It was pointed out that under the existing conditions the work at the hospitals was interfered with, except at the Children's Hospital, and that provision should be made at the Fairfield Hospital for all infectious diseases, including cerebro-spinal fever. The deputation received a sympathetic reply, and the matter had been laid before the Cabinet. Dr. Honman also reported that the Royal Commission was still considering the cerebro-spinal meningitis outbreak; that it proposed to invest the Board of Health with ample powers to deal with this and other infectious diseases; that the Commission was about to visit the Fairfield Hospital, with a view to ascertaining what accommodation could be provided, and that the report of the Commission would be ready on November 17, 1915.

The President accepted the invitation to adjudicate with others upon the claims of applicants for the position of whole-time Principal Medical Officers for the 3rd Military District.

A scheme put forward by the Defence authorities was read. It related to the treatment of returned invalided soldiers and of those becoming sick while on leave. The scheme generally was approved. Certain amendments were insisted on, particularly that concerning the responsibility being thrust upon the private medical practitioner of reporting to the camp officer in regard to any soldier on leave whom he may have been called upon to attend. The Advisory Board was empowered to act in accordance with the terms of the report submitted.

A protest was also entered against the intention of the Defence Department to substitute a visiting medical practitioner at the Clifton Springs Convalescent Home for the whole-time medical officer at present on duty.

A letter was read from the Royal Victorian Trained Nurses' Association, to the effect that the ordinary certificate of that body would be issued to nurses, who would be registered by the Association under the extraordinary provisions adopted to meet the shortage of nurses. The Council was assured that a separate list would not be kept of the third-year trainees who had finished their course at the Base Hospital, and had spent six months at an approved hospital for women, in accordance with the scheme previously agreed upon.

A Conference was held at the Victoria Barracks, at the suggestion of the acting Director-General of Medical Services, to discuss the question of Probationer Nurses in Military General Hospitals. Dr. Jones, who attended the Conference, reported that the R.V.T.N.A. was opposed to the employment of first-year trainees at Military Hospitals. No definite conclusion was arrived at. The R.V.T.N.A. would ascertain how many nurses with some experience would be available. In the meantime the acting Director-General of Medical Services would communicate with the Principal Medical Officers of each State on this matter. The Council drafted a letter to each Branch, stating that there appeared to be some valid objection to the employment of nurses with no experience as probationers in Military Hospitals, and that the Royal Victorian Trained Nurses' Association and the Victoria Branch of the British Medical Association were in accord in this matter. Professor Berry pointed out that the orderlies whom it was proposed to supplant had had no previous experience.

Letters of sympathy were sent to the widows of the late Drs. E. U. O'Sullivan and G. D. Dickinson.

The draft of the annual report, for submission to members at the general meeting, on December 1, 1915, was read, and a Sub-Committee was appointed to attend to the publication thereof. It was decided to call a special meeting prior to the annual meeting to amend the rule with regard

to junior members' subscriptions. The present rate was £1 11s. 6d., but the Council decided to ask the members to increase it to £2 2s., seeing that the charges for the two Journals amounted to £2 1s.

It was reported to the Council that the Director-General of Medical Services would not grant any recommendation to medical men desiring to join the R.A.M.C. as long as there was a prospective shortage of medical men for the A.A.M.C., and that it was not likely that there would be any diminution of the shortage for some time to come.

The congratulations of the Council were forwarded to Captain Frank Kerr, who had been awarded the D.S.O. for conspicuous gallantry.

It was reported that a member of the Branch had refused to sign the certificate for the maternity bonus until his fee for accouchement had been paid. This matter had been reported to the Commissioner, who had called upon the medical practitioner for an explanation. At an interview held subsequently the Commissioner stated that there was no law compelling a medical practitioner to sign the certificate.

The following nominations have been received for the Council. Nominees have the right of withdrawal up to November 19, 1915, when the ballot papers will be issued to each member in the State. The ballot papers will be counted on the evening of November 30, and the result reported to the annual meeting on December 1.

President: Dr. A. V. M. Anderson.

Vice-Presidents (two): Drs. L. J. Balfour, F. Hobill Cole, W. R. Boyd, W. E. Jones, R. L. M'Adam, and Prof. R. J. A. Berry.

Hon Treasurer: Dr. C. H. Mollison.

Hon. Secretary: Dr. L. S. Latham.

Hon. Librarians: Drs. A. W. F. Noyes, A. W. D. Robertson and H. Douglas Stephens.

Members of Council (fourteen): Drs. Frank Andrew, L. J. Balfour, R. J. A. Berry, W. R. Boyd, B. Crellin, H. O. Cowen, F. L. Davies, H. B. Devine, J. H. L. Cumpston, K. Hiller, Andrew Honman, J. Dunbar Hooper, W. E. Jones, A. L. Kenny, T. E. L. Lambert, Alex. Lewers, R. L. M'Adam, J. Newman Morris, Alan Newton, W. Ostermeyer, Sidney Pern, D. Rosenberg, Sidney V. Sewell, D. E. Stewart, R. N. Wawn, A. E. R. White, J. F. Wilkinson, A. Jeffreys Wood.

At a meeting of the New South Wales Branch, held on November 12, 1915, at the B.M.A. Building, 30-34 Elizabeth Street, Sydney, prior to the reading of scientific papers, Dr. George Armstrong, the President, announced the death of Mr. F. J. Hean, caretaker to the B.M.A. Building. Mr. Hean's services to the Branch had been of great value, and he was held in respect by all the members. A resolution was proposed and carried, all members standing, that an expression of the sympathy of the Branch be conveyed to Mrs. Hean.

## Scientific Societies.

### THE PATHOLOGICAL CLUB.

The members of the Pathological Club assembled at the Bureau of Microbiology, Macquarie Street, Sydney, on November 10, 1915. Dr. H. G. Chapman occupied the chair.

A letter was received from the Secretary of the New South Wales Branch of the British Medical Association on the question of the Club forming a section of the Branch. It was decided to take no action.

Dr. J. B. Cleland showed some dried Sphagnum moss. He suggested that this moss might replace absorbent wool as a surgical dressing. Absorbent wool did not act well in soaking up a discharge. The fluid tended to pass completely through the dressing at one spot instead of diffusing through the mass of the wool. He thought that the moss would take up a large amount of liquid, though he had not made any exact measurements. Even if the moss did not replace wool, it might serve as a substitute in this time of high prices and scarcity. He sought information on the question of sterilization, especially in regard to the mea-

tures needed to destroy the bacillus of tetanus. Dr. Darling said that in Europe this moss was used without sterilization. He did not think there was much danger from tetanus. Dr. S. Dodd advocated treatment in the autoclave at 120° C. Dr. H. G. Chapman recommended the classical method of three heatings in steam, with incubation between the heatings.

Dr. J. B. Cleland showed a portion of skin from a pig. A large number of cysts were present in the skin. Many of the cysts contained a mass of melanin. He had not determined the position of the cysts in the skin, but was of opinion that they were connected with hair-follicles. He then demonstrated a part of the foot of an aboriginal showing actinomycosis. There was fibrotic thickening on the dorsum of the foot. Many sinuses entered from the dorsal surface of the foot. An examination with X-rays had led to the suggestion that the condition was osteomyelitis rather than tuberculosis. The foot had then been removed by amputation. On macroscopical examination the mass of fibrous thickening showed scattered purulent foci. Yellow grains were present in the pus. On microscopical examination the sections showed the typical radial arrangement of the club-fungus. This specimen was compared with another made from the liver of a man. Dr. Harris, of Armidale had supplied the following notes as to history. The patient had complained of not being well for one month. He had then been taken suddenly ill. He had severe pain in the abdomen. The respirations were rapid, being about 40 per minute. The pulse was small, and hardly perceptible. There was some tenderness on palpation of the abdomen. The patient had been seized suddenly with illness while at work. He was put to bed, but died in a few hours. On post-mortem examination the liver was found enlarged, with two large abscesses in the right lobe. A few small abscesses were scattered through the same lobe. A number of yellow spots were noted in the liver. Microscopical examination of sections of a portion of the liver revealed the presence of the ray-fungus. The opinion was expressed that the patient had died of pulmonary embolism. Dr. Cleland then showed a cyst from the neck of the ox. The wall of the cyst was composed of malignant adenoma. The growth was thought to have arisen from the thyro-glossal duct. Two specimens of carcinoma of the thyroid gland were exhibited. One growth was scirrhus and the other encephaloid. Sections of each growth were inspected.

Dr. Cleland showed an embryoma of the testis. Sections of the tumour revealed the presence of skin, hair follicles, cartilage and tubular glands. He suggested that these growths were derived from the cells of the seminiferous tubules of the testis. He thought that they might be derived from spermatogonia, and that these spermatogonia might be fertilized by sperms. He was of opinion that, if the number of chromosomes in the cells of these growths were counted, they would be found to be reduced. Such evidence would be conclusive to his mind of the origin from spermatozoa. Dr. S. J. Johnson said that the supposition put forward by Dr. Cleland was not supported by any biological evidence. There was no case known where an embryo developed from a male cell or its progenitor. He saw no necessity for such a theory when a more simple hypothesis was available. Dr. Chapman suggested that even if the chromosomes could be counted accurately, which he doubted, their evidence was by no means conclusive, as the embryoma, even if derived from an ovum, might be parthenogenetically developed.

Dr. H. G. Chapman read some notes on cases of glycosuria. He related in the first place the history of a young man who had a small amount of glucose continuously in the urine. The patient was in good health, presented none of the symptoms of diabetes, and had enjoyed the best of health previously. The condition of the urine had been discovered accidentally. The patient had been under observation for some months. He took a diet with much starch and sugar in it, and excreted 2 grams of sugar daily. By reducing greatly his diet of starch the sugar in the urine was diminished by one-half gram. He had not yet estimated the sugar in the patient's blood. He mentioned in the second place a woman of middle age who, on strict diet, passed urine containing 180 grams of glucose per diem. The patient passed 18 grams nitrogen daily. She was

becoming blind. On allowing 40 or 50 grams of starch the patient improved, so that she passed 40 grams of sugar daily. The improvement continued. Dr. Chapman said that he had examined a number of samples of gluten bread in connexion with these cases. They all contained more starch than ordinary bread. The bread or biscuit contained much less water than ordinary bread, three or four times as much protein, and about the same amount of starch and sugar.

Dr. Wallace gave an account of a patient who presented a growth on the front of the right groin and thigh. The tumour infiltrated the muscles of the thigh, and extended up into the abdominal wall. The growth was considered to be a malignant sarcoma. The patient had been sent to the Coast Hospital for treatment with Coley's fluid. Dr. Clubbe had advised that some of the growth should be removed with a curette, so as to leave as little as possible before using Coley's fluid. The scrapings were sent to the Bureau. Dr. Cleland noted a few bodies with thickened walls like vegetable cells. He thought these had contaminated the specimen. Later he was forwarded some more of the bloodless jelly that composed the mass of the growth. Dr. Cleland then described how he had found this material to consist of a very large number of these small thick-walled cells. At times they appeared to lie in a mass resembling an amoeba. The cells resembled yeasts. They were not quite circular, but presented a knob-like projection. He thought that they were myxo-sporidia, though he had not found any polar bodies. Dr. S. J. Johnston thought that they were neither yeasts or myxo-sporidia. He asked whether they might not be immature forms. Dr. Chapman said that he was satisfied that they were not yeasts. He discussed their resemblance to coccidia. He asked whether any attempt had been made to cultivate them. Dr. Cleland said the tissue had been placed in formalin on reaching the laboratory.

## Public Health.

### THE HEALTH OF VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the week ending November 11, 1915:—

|                        | Metropolitan. |       | Rest of State. |       | Totals. |       |
|------------------------|---------------|-------|----------------|-------|---------|-------|
|                        | Cs.           | Dths. | Cs.            | Dths. | Cs.     | Dths. |
| Diphtheria .. .. .     | 66            | 1     | 14             | 0     | 80      | 1     |
| Scarlatina .. .. .     | 16            | 0     | 5              | 0     | 21      | 0     |
| Enteric Fever .. .. .  | 1             | 0     | 4              | 0     | 5       | 0     |
| Pulmonary Tuberculosis | 13            | 5     | 10             | 6     | 23      | 11    |

The following is the return of cases of epidemic cerebro-spinal meningitis notified to the Board during the week ending November 11, 1915:—

|                  | Metropolitan Area. |   | Rural Districts. |   | Totals. |   |
|------------------|--------------------|---|------------------|---|---------|---|
|                  | Cases.             |   | Cases.           |   | Cases.  |   |
| Military .. .. . | —                  | — | —                | — | —       | — |
| Civil .. .. .    | 8                  | — | 3                | — | 11      | — |

### THE HEALTH OF NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, during the fortnight ending November 8, 1915:—

|                        | Metropolitan Combined Districts. |       | Hunter River Combined Districts. |       | Remainder of State. |       | Total. |       |
|------------------------|----------------------------------|-------|----------------------------------|-------|---------------------|-------|--------|-------|
|                        | Cs.                              | Dths. | Cs.                              | Dths. | Cs.                 | Dths. | Cs.    | Dths. |
| Enteric Fever .. .. .  | 37                               | 1     | 2                                | —     | 19                  | 1     | 58     | 2     |
| Scarlet Fever .. .. .  | 199                              | 2     | 17                               | —     | 213                 | 3     | 429    | 5     |
| Diphtheria .. .. .     | 86                               | 5     | 4                                | 1     | 62                  | 3     | 152    | 9     |
| Infantile Paralysis .. | 3                                | —     | —                                | —     | —                   | —     | 3      | —     |
| Meningitis .. .. .     | 2                                | —     | —                                | —     | 3                   | —     | 5      | —     |
| P'lm'n'y T'b'c'lsis    | 90                               | 2     | —                                | —     | —                   | —     | 90     | 2     |

### SMALL-POX IN NEW SOUTH WALES.

The following cases of small-pox have been notified to the Department of Public Health, New South Wales, during



the week ending November 14, 1915:—

| Country.                                 | Cases.    |
|--|-----------|
| Newcastle and Surrounding District .. .. | 34        |
| Gloucester (infected at Newcastle) .. .. | 4         |
| <b>Total .. ..</b>                       | <b>38</b> |

#### INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ending October 23, 1915:—

| Disease.                        | No. of Cases. |
|---------------------------------|---------------|
| Enteric Fever .. ..             | 25            |
| Diphtheria .. ..                | 22            |
| Pulmonary Tuberculosis .. ..    | 17            |
| Varicella .. ..                 | 9             |
| Scarlet Fever .. ..             | 5             |
| Cerebro-spinal Meningitis .. .. | 4             |
| Erysipelas .. ..                | 3             |
| Malaria .. ..                   | 2             |
| Puerperal Fever .. ..           | 2             |
| <b>Total .. ..</b>              | <b>88</b>     |

The following notifications have been received by the Department of Public Health, Queensland, during the week ending November 6, 1915:—

| Disease.                        | No. of Cases. |
|---------------------------------|---------------|
| Enteric Fever .. ..             | 48            |
| Pulmonary Tuberculosis .. ..    | 10            |
| Diphtheria .. ..                | 22            |
| Varicella .. ..                 | 13            |
| Cerebro-spinal Meningitis .. .. | 1             |
| Erysipelas .. ..                | 1             |
| Scarlet Fever .. ..             | 1             |
| Ankylostomiasis .. ..           | 1             |
| Membranous Croup .. ..          | 1             |
| Puerperal Fever .. ..           | 1             |
| <b>Total .. ..</b>              | <b>99</b>     |

#### INFECTIVE DISEASES IN HOBART.

The following notifications have been received by the Medical Officer of Health, Hobart, for the month of October 31, 1915:—

|                                 | Cases.    |
|---------------------------------|-----------|
| Cerebro-spinal Meningitis .. .. | 4         |
| Ophthalmia Neonatorum .. ..     | 1         |
| Diphtheria .. ..                | 13        |
| Enteric Fever .. ..             | 3         |
| Varicella .. ..                 | 2         |
| <b>Total .. ..</b>              | <b>23</b> |

#### INFECTIVE DISEASES IN WESTERN AUSTRALIA.

The following notifications have been received by the Department of Public Health, Western Australia, during the week ending October 23, 1915:—

| District.           | Enteric Fever. | Diphtheria. | Scarlatina. | Pulmonary Tuberculosis. | Erysipelas. | Puerperal Fever. | Cerebro-Spinal Meningitis. |
|---------------------|----------------|-------------|-------------|-------------------------|-------------|------------------|----------------------------|
| Fremantle .. ..     | —              | —           | —           | —                       | —           | —                | 1                          |
| Cottesloe .. ..     | 1              | —           | —           | —                       | —           | —                | —                          |
| Subiaco .. ..       | —              | 1           | —           | —                       | —           | —                | —                          |
| Perth .. ..         | —              | 6           | —           | 1                       | 1           | —                | 1                          |
| Kalgoorlie .. ..    | —              | 1           | —           | 1                       | —           | —                | —                          |
| Boulder .. ..       | —              | 1           | —           | —                       | —           | —                | —                          |
| Bl'kb'y C'mp .. ..  | —              | 1           | —           | —                       | —           | —                | —                          |
| Harvey .. ..        | —              | —           | —           | —                       | —           | 1                | —                          |
| Westonia .. ..      | —              | 1           | —           | —                       | —           | —                | —                          |
| Greenbushes .. ..   | —              | —           | —           | 1                       | —           | —                | —                          |
| Troopships .. ..    | —              | —           | 1           | —                       | —           | —                | —                          |
| Cuballing .. ..     | 1              | —           | —           | —                       | —           | —                | —                          |
| Jurokine .. ..      | —              | 1           | —           | —                       | —           | —                | —                          |
| Bellevue .. ..      | —              | —           | —           | 1                       | —           | —                | —                          |
| <b>Totals .. ..</b> | <b>2</b>       | <b>12</b>   | <b>1</b>    | <b>4</b>                | <b>1</b>    | <b>1</b>         | <b>2</b>                   |

The following notifications have been received by the Department of Public Health, Western Australia, during the week ending October 30, 1915:—

|                        | Enteric Fever. Cases. | Diphtheria. Cases. | Pulmonary Tuberculosis. Cases. | Erysipelas. Cases. |
|------------------------|-----------------------|--------------------|--------------------------------|--------------------|
| Fremantle .. ..        | 1                     | 1                  | —                              | 1                  |
| Claremont .. ..        | —                     | —                  | —                              | 1                  |
| Subiaco .. ..          | —                     | 3                  | —                              | —                  |
| Perth .. ..            | 1                     | 2                  | 3                              | —                  |
| Midland Junction .. .. | 1                     | —                  | —                              | —                  |
| South Perth .. ..      | 1                     | —                  | —                              | 1                  |
| Kalgoorlie .. ..       | —                     | 1                  | 1                              | —                  |
| Boulder .. ..          | —                     | —                  | 1                              | —                  |
| York .. ..             | —                     | 1                  | —                              | —                  |
| Southern Cross .. ..   | —                     | 2                  | —                              | —                  |
| Katanning .. ..        | —                     | —                  | 1                              | —                  |
| <b>Totals .. ..</b>    | <b>4</b>              | <b>10</b>          | <b>6</b>                       | <b>2</b>           |

#### THE HEALTH OF AUCKLAND.

The following notifications have been received by the District Health Officer, Auckland, during the month of October:—

|                                 | City. Cases. | Suburbs. Cases. | Country Districts. Cases. | Total. Cases. |
|---------------------------------|--------------|-----------------|---------------------------|---------------|
| Scarlatina .. ..                | 10           | 23              | 6                         | 39            |
| Diphtheria .. ..                | 7            | 6               | 26                        | 39            |
| Enteric Fever .. ..             | 1            | 7               | 43                        | 51            |
| Pulmonary Tuberculosis .. ..    | 7            | 6               | 14                        | 27            |
| Blood Poisoning .. ..           | —            | 3               | 3                         | 6             |
| Cerebro-Spinal Meningitis .. .. | —            | —               | 1                         | 1             |
| Hydatids .. ..                  | —            | —               | 1                         | 1             |

#### THE HEALTH OF SYDNEY.

The mortality return for September, 1915, as supplied by the Government Statistician, shows that 735 deaths occurred in the Metropolis of Sydney, including 31 deaths of individuals previously resident outside the Metropolis, and deaths classified as taking place in the islands and shipping in the harbour.

Thus, calculating on an estimated population of 752,500, the annual death-rate for the month works out at 11.72 per 1,000 of the population.

Deducting the deaths of persons non-residents of the Metropolis in the Mental Hospitals of Leichhardt and Hunter's Hill (Callan Park and Gladsville), and adding the deaths of persons residents of the Metropolis occurring at the Benevolent Asylums, Mental Hospitals and Consumptive Sanatoria situated outside the Metropolis, the number of deaths was 711, giving a corrected death-rate of 11.33 per 1,000.

Among children under one year of age, 104 deaths were recorded for the Metropolis.

There were 1,712 births during the month, giving a rate of 27.30 per 1,000 of the population, which is not satisfactory, being 4% below the average for September of the previous five years.

The infantile mortality rate was 60 per 1,000 births; that being 3% below the average for the month of the previous five years.

Infectious diseases were responsible for 87 deaths, of which 51 were due to measles, 7 to scarlet fever, 2 to influenza, 5 to whooping cough, 10 to diphtheria, 4 to typhoid fever, 7 to cerebro-spinal fever and 1 to erysipelas.

Diarrhoeal diseases were credited with 10 deaths.

Phthisis caused 34 deaths, cerebral hæmorrhage 26, cancer 51, diseases of the heart and blood vessels 83, pneumonia 97, and Bright's disease 50.

Compared with the average in September for the previous five years, there were increases in the number of deaths from epidemic diseases, pulmonary diseases, Bright's disease and diseases of the heart and blood vessels, with decreases in diarrhoeal diseases, cancer and phthisis.

Three hundred and forty-seven cases of scarlet fever, 198 of diphtheria, 53 of typhoid fever, 1 of anterior poliomyelitis and 2 of acute malarial fever were notified during the month of September.

Thirteen cases of phthisis (consumption of the lungs and consumption of the throat) were notified under the City Council's by-laws, and 10 premises were disinfected after the death or removal of the patients.

(Signed) F. M. SUCKLING,  
Acting Medical Officer of Health.

The Tasmanian Government has requested the Commonwealth Prime Minister to permit Dr. Elkington, Chief Quarantine Officer, of Queensland, to proceed to Tasmania for the purpose of advising the Tasmanian Government upon the details of the health administration of the State.

### Naval and Military.

The following appointments have appeared in the *Commonwealth of Australia Gazette*, No. 140, under date of November 10, 1915:—

- Army Medical Corps.  
To be Major, with pay of Captain—  
Honorary Major J. K. Richards, Australian Army Medical Corps Reserve.
- To be Major—  
Edgar Jabez Brown.
- To be Captain—  
Captain A. R. Clayton, A.A.M.C.  
Captain (provisional) J. F. Bartley, A.A.M.C.  
Honorary Captain J. F. Agnew, A.A.M.C. Reserve.  
Honorary Captain H. O. Lethbridge, A.A.M.C. Reserve.
- Honorary Captain W. R. Clay, A.A.M.C. Reserve.  
Honorary Captain V. J. E. Zichy-Woinarski, A.A.M.C.
- Honorary Captains G. M. Parker and D. M. Steele, A.A.M.C. Reserve.
- Thomas James Henry.  
Valentine Francis Crowe.  
Laurence Bedford Elwell.  
Edgar Winn Fox Dolman.  
John Francis Souter.  
Jonathan Percy Moss Black.  
Frank Macky and Arthur Madgwick Davidson.  
Henry Talbot Hamilton.  
Quinto Ercole.  
Thomas Nisbett Wright, Eric Pitty Barbour, and Lionel Mason Snow.  
Charles Henry Smith-Hozier, Ernest Albert Guymer, Sydney Theodore Appleford, and Arthur James Cahill.  
William Robert Tomlinson.
- Appointment Terminated.  
The appointment of Major W. H. Read is terminated.
- To be Captains—  
Captain (provisional) W. A. Hailes, A.A.M.C.  
Captain (provisional) D. D. Gibson, A.A.M.C.  
Colin Cope Simson.

- Army Medical Corps.  
To be Lieutenant-Colonel—  
Major W. W. Hearne.
- To be Majors—  
Captain J. B. St. V. Welch.  
Captain (Honorary Major) J. Corbin.  
Captain A. Y. Fullerton.  
Captain (temporary Major) A. H. Tebbutt.  
Captain A. J. Aspinall.
- To be Captains—  
Cedric Walter Wilberforce Murray, and Charles Wynwood Bray.

The Distinguished Service Order has been awarded to Captain Frank Kerr for conspicuous bravery and devotion to duty.

The 110th casualty list, issued on November 15, 1915, contains the names of Captain A. R. Haynes (in hospital) and Captain R. W. Chambers (ill).

Captain J. Booth Clarkson has been appointed Medical Officer in charge of the Permanent Defence Forces at Newcastle.

The following is an abstract from a letter dated September 23, 1915, written by Captain A. V. Honman, 2nd Field

Ambulance, A.A.M.C., to his father, Dr. Andrew Honman, President of the Victorian Branch of the British Medical Association:—

"I thought it might interest you to hear of the type of dysentery one gets here. You know that Professor Martin is in the No. 3 General Hospital. He and Stawell went through a series of dysentery cases with blood and mucus. They examined 80 likely cases, and all of them showed amoebae. It looks as if there were no bacillary cases at all. We used emetine at Anzac, and this acted diagnostically as well, while it did not cure it alleviated the condition. . . . Poor Stawell had amoebic dysentery, and is only just getting better. There is very little typhoid; the anti-typhoid injections are very effective. No cholera. Some of the patients with diarrhoea get jaundice, and I have seen many with pain over the gall bladder, with both tenderness and rigidity, for all the world like gall stones. . . . The anti-typhoid inoculation accounts for the slight fever cases, with malaise, which are really typhoids of a mild type through raised resistance. . . ."

### Corrigendum.

On November 6, 1915, page 449, the names of the members of the Federal Medical War Committee, and of the State Medical War Committees were published. Under Tasmania, Dr. R. G. Scott's name was incorrectly given as "Dr. R. G. Sprott."

### THE BRITISH RED CROSS SOCIETY. AUSTRALIAN BRANCH.

Public attention has been focussed during a succession of months on the Red Cross Society and its various spheres of activity. The utility of the organization, both within the Commonwealth and in the fighting line, has become proverbial. The work has been conducted as a work of love, and, consequently, the results have eclipsed the more professional endeavours of the State Departments. The task undertaken by the Australian Branch of the British Red Cross Society has proved a much larger one than was anticipated at the beginning of the war. Difficulties have arisen that were not, and could scarcely have been, foreseen. Some mistakes were undoubtedly made, but these were due largely to the complicity of the task, to the fact that the majority of those in authority had little previous experience in the organization of a large undertaking, and to the fact that this Society was called on at odd times and in many places to cover the deficiency of the Department of Defence.

A number of annual reports have been issued in one volume dealing with the work of the various Divisions and that carried out at the Headquarters of the Australian Branch.

It will be remembered that a Branch of the British Red Cross Society was formed on August 6, 1914, as recorded in *The Medical Journal of Australia* of April 17, 1915, page 368, and that Divisions were created in each of the States. Her Excellency Lady Helen Munro Ferguson became the President of the Branch, while the Presidency of the Divisions was filled by the wives of the State Governors. A Central Council was formed, and a number of influential ladies were elected to it. In addition, Captain Sherwin, A.M.C., Mr. John Grice, Colonel Fetherston, Acting D.G.M.S., Dr. Springthorpe, representing St. John Ambulance Association, and Dr. J. W. Barrett were appointed members. Dr. Edith Barrett has followed her brother in the position of Honorary Secretary. Before the departure of Australian troops to the front, money and goods were transmitted to the Red Cross Society in London, but more recently the money and goods have been sent direct to Egypt. Lieutenant-Colonel Barrett acted as an executive officer of the Red Cross Committee. A depôt for Red Cross goods was established at the General Hospital at Heliopolis, and was placed under the care of a medical officer, with a staff of nurses and orderlies. The system introduced for checking and controlling the goods distributed appears to be very simple and excellent. Every soldier, on arrival at the hospital, receives a box containing a brush, a toothbrush, tooth

powder, a box of cigarettes, a bar of chocolate, a pencil and paper.

In order to meet the difficulties consequent on the establishment of Australian Hospitals in various parts of the Mediterranean, two commissioners were sent to Egypt to superintend the allocation and distribution of goods and direct other activities promoted by the Society. The services of Mr. Adrian Knox, K.C., of Sydney, and Mr. Norman Brookes, of Melbourne, were secured. These gentlemen have proceeded to Egypt without any remuneration. The commissioners have established an enquiry bureau in Egypt for the purpose of collecting and handing on supplementary information in regard to Australian wounded and missing soldiers.

The Honourable Edward Miller has acted as Treasurer of the Australian Branch since its foundation. A balance-sheet has been drawn up dealing with £171,188 11s. 6d., the amount received by the Central Council during the first year of its existence. This amount is made up of £78,146 from the Victorian Division, £50,409 from the New South Wales Division, £17,866 from the South Australian Division, £11,074 from the Queensland Division, £9,545 from the Tasmanian Division, £2,053 from the Northern Territory, £1,505 from the Western Australian Division, and smaller sums from Norfolk Island and British New Guinea. On the other side of the sheet an account of the expenditure of this money is given. The sum of £72,468 was remitted to the High Commissioner in London, to be used for the benefit of the Australian sick and wounded, £21,378 has been spent on motor ambulances, £36,560 were set aside for the Australian Hospital Units, £3,000 were directed by request to the French Red Cross Fund, while smaller sums were deflected to the Belgian and Serbian Red Cross Funds, to the Hospital for Indians and to Queen Mary's Fund, £1,000 were allocated for the Australian prisoners in Constantinople, and £500 for the Leake Convalescent Hospital for Australians. The total amount of the general and special gifts was £137,787 15s. 3d. In addition, £22,000 were remitted to His Excellency Sir Henry McMahon for the Australian sick and wounded in Egypt.

The amount of money spent in Australia was £8,373, including £1,183 for the endowment of beds to the military hospitals, £1,050 for two motor ambulances, and £494 for extra medical comforts and appliances for the transports. The cost of packing-cases and material for packing, together with freight, cartage and insurance, amounted to £1,690. The expenditure on wages, printing, stationery, travelling, badges, collecting tins, etc., amounted to £893. At the end of the year the Society had a balance in hand of £2,700.

The Council extends its warm thanks to all individuals and organizations that have contributed to the funds of the Society. Special mention is made of valuable help arising from a series of concerts given by Madame Melba, and resulting in approximately £10,000 being handed over to the Society.

A scheme of Voluntary Aid Detachments is in the course of organization in all Divisions, and is already in operation in New South Wales, Victoria, and Tasmania. The movement was inaugurated on August 6, 1915. At that date over 600 trained St. John Ambulance men and women had been enrolled as members of the Voluntary Aid Detachments. In addition, over 1,000 women have enlisted as voluntary domestic assistants in Victoria. Rest stations are being set up along the lines from Melbourne to Brisbane.

The Committee record its appreciation of the magnificent response made by the community on Australia Day, July 30, throughout the Commonwealth.

A "Linen Day" was organized by Mrs. Cave, of the Victorian League, and was held in Victoria. As a result, ample supplies of linen are now in hand.

The Defence Department found it necessary to commandeer the whole stock of wool in the Commonwealth. The Department agreed to allow the Red Cross Society to buy flannel from them. This flannel is sold to the local Branches. The Arts and Crafts Society is contemplating the organization of hand spinners to augment the supplies.

Many valuable gifts were sent by the various Divisions to the Australian Hospitals which had been established in Egypt. The Australian Branch has also given £10,000 for the provision of extra equipment, etc. Money, com-

forts, and hospital clothing have been supplied to all troopships leaving Australia.

The High Commissioner has been asked to provide all that may be necessary to render the two ships carrying returned invalids to Australia as comfortable and as complete as possible.

The sum of £1,000 has been sent through the American Ambassador in Constantinople for the relief of Australian prisoners in that city.

#### Headquarters Dépôt.

A few days after the formation of the branch, the headquarters dépôt was opened at Federal Government House. A clerk with two assistants was engaged, and many voluntary workers lent their aid. The work has been carried out with exemplary zeal. Messrs. Connibere, Grieve, and Connibere lent a packer to the Red Cross Society. In addition a number of other firms have placed their employees at the disposal of the Committee. The Boy Scouts have also proved very valuable to the organization.

In order to attract public attention to the work, window displays were organized. The first was established in Sydney, and a large number have since been organized in the large cities, suburbs and country towns.

During the year, August 7, 1914, to August 7, 1915, 6,748 cases of articles were forwarded to England and Egypt from the headquarters dépôt. Among the articles supplied were over 7,000 blankets, over 12,000 cholera belts and binders, close on 100,000 handkerchiefs, over 90,000 pairs of socks, over 60,000 shirts, over 27,000 pyjamas, over 5,700 pairs of bed socks, nearly 15,000 pairs of mittens, nearly 17,000 sheets, over 48,000 towels, etc. In addition a large amount of gauze and other medical, surgical and hospital sundries, were sent.

#### New South Wales Division.

The report of the New South Wales Division is a brief document. The Branch formed on October 16, 1913. On August 14, after 48 hours' notice, £1700 worth of clothing and stores were supplied to the New Guinea Expeditionary Force. This was afterwards supplemented. Since that date the organization of the Division has proceeded satisfactorily, and upwards of 431 sub-divisions or branches have been formed throughout the State. The New South Wales Division has concentrated its efforts to a large extent on the forwarding of supplies to the parent Society. In January, 1915, 19 large motor waggons, 5 touring cars, and two motor ambulances were sent direct to London. In the same month the Committee of the N.S.W. Railways and Tramways War Fund decided to build, equip and maintain three huts at the British Red Cross Society Hospital at Netley. The cost of this amounted to £900, while the maintenance was £60 per week.

The New South Wales Division has forwarded goods to the British Red Cross Society to the total value of £58,331. Of this sum £33,388 was spent in clothing, £1,583 in blankets, £5,198 in food stuffs, £17,917 in motor vehicles, and £245 in tobacco. The remittances in cash amounted to over £10,000 for general purposes out of a total of £19,654.

The first hospital unit, which left on the steamship *Kyarra*, received £2,148 in cash, and stores to the value of £4,645. No. 3 General Hospital, which has been established in Lemnos, received £4,690. The hospital ships have received clothing and stores to the value of £2,613. In addition £8,360 has been sent in cash for distribution among the hospitals in the Mediterranean, as well as stores to the value of £38,956.

Clothing and comforts have been sent to every transport on which New South Wales troops have been present. Every army nurse leaving for active service has been given £10 for additional equipment. The sum of £914 has been spent on clothing, stores and equipment for the garrison and Liverpool Hospitals. A considerable amount of extra equipment, including floor covering, blankets, clothing and foodstuffs, has been supplied to the No. 4 General Hospital at Randwick. Red Cross tents will be opened and maintained in every military camp.

The total amount received by the New South Wales Division up to August 7, 1915, was £111,100, of which £99,297 had already been expended.

#### Victorian Division.

The inauguration of a Victorian Division took place on August 21, 1914. The preliminary work was undertaken



with enthusiasm, and a large amount of co-operation was secured.

As the Australian Branch had its headquarters and depot in Melbourne, it was felt that the administrative work of the Red Cross in Victoria would best be undertaken by it. The Victorian Branch therefore confined its energies to raising funds. For this reason the report of the Division contains little else than an account of the methods employed for the collection of money and goods. The receipts amounted to £9,544.

#### South Australian Division.

The South Australian Division was organized at a large meeting held at the Town Hall, Adelaide, on August 14, 1914. The Division has carried out its work in an excellent manner, and has every reason to be satisfied with the results of the first year's endeavours. The organization was started early, and as a result 145 branches and numerous small circles in town and country districts were formed. A central packing depot was organized at Government House, and the goods, after sorting and packing, were despatched to the High Commissioner in London and Egypt, and to the Director-General of Australian Medical Services in Egypt. During the fourth quarter of the year a number of Sock Clubs were established, and upwards of 10,000 pairs of socks were made by the members. A very large number of articles have been received and prepared. The majority of these goods were despatched to England and to Egypt, but a certain proportion was retained for the returned invalided soldiers.

The Division presented 14 ambulances to Lord Kitchener from the veterans of South Australia. An anonymous gift of £1700 was used to purchase ambulances, which are now at the Australian Base Hospital at Wimereux. Two motor kitchens, one four-horse travelling field kitchen, an operating table, and various reliable articles of equipment have been supplied.

The total income from all sources amounted to £21,261. Of this sum £19,163 has been expended, including £17,500 remitted to the Central Council for transmission to the parent Society.

#### Queensland Division.

The Queensland Division was formed as a result of a meeting held on August 13, 1914, and the report covers a period of 10½ months. Since the inauguration 178 branches have been formed, and a considerable amount of activity has been exercised throughout the whole State. The only paid employee of the Committee was a man engaged in manual work, including the lifting of cases and the loading of carts. The rest of the work has been voluntary. Several members of the Committee have devoted a great deal of time, being in daily attendance. The total receipts in money amounted to £26,065. In addition goods valued at wholesale prices at £20,415 were received. The Division therefore was responsible for £46,480.

Some supplies were sent to Enoggera. The greater part, however, of the goods was shipped to England, Egypt, Malta, and the Dardanelles, and some were placed at the disposal of the hospital transports. The sum of £1700 was subscribed to the Lady Dudley Hospital, and a further £2,000 was sent direct to the British Red Cross Society.

Eight motor ambulance transports were purchased, and the sum of £3,245 was spent on motor ambulances.

A factory for the manufacture of sheepskin vests is being established. The example of the New South Wales Division was emulated in this respect. It is anticipated that the cost of each vest will be 1s. 9d. An appeal has been issued to the Pastoralists and Graziers of Queensland for gifts of sheepskins.

#### Western Australian Division.

The Western Australian Division has laboured at a great disadvantage owing to the unprecedented drought, which resulted in the ruin of the wheat crop in 1914. Notwithstanding the consequent depression in trade, £5,127 were collected. Other funds aiming at similar achievements have raised approximately £3,500 for motor ambulances, etc. In addition to the gifts of money, gifts in kind of an estimated value of £5,000 have been received. During the early part of the year the goods were transhipped to England, but more recently they have been consigned to Egypt.

An arrangement was entered into between the Western Australian Division of the Red Cross Society and the Committee responsible for the Western Australian Day Fund, in accordance with which the proceeds of this fund should be handed over for distribution to the Division. Between £40,000 and £50,000 was collected, and as announced in a circular issued at the time, the money was "applied by the Red Cross Society in a manner consistent with the basis upon which subscriptions were sought."

At the June monthly meeting of the Executive Committee it was resolved that the balance of over £3,000 should be retained in the Treasurer's hands until the needs of the sick and the wounded soldiers returning to Western Australia had been ascertained. In these circumstances the contribution of this Division to the Central Council has been relatively small.

#### Tasmanian Division.

The organization in Tasmania has been carried out successfully, and arrangements have been made for the work to be undertaken throughout the whole State. No less than 139 centres have been established, and even in the isolated districts much has been achieved. The total amount received was £15,198.

The value of the goods despatched was close on £9,000. They consisted of over 71,000 articles. All the packing cases were presented free of cost by commercial firms, and the packing and labelling has been carried out by voluntary workers. The transport within the State, and to Melbourne has been performed gratuitously. As has already been pointed out in these columns, two Executive Committees have been formed for the purpose of conducting the work of the Division, viz., the Northern and the Southern.

A scheme of voluntary aid has been carried into effect. Instruction in first-aid has been given, and 187 certificates have been granted. Classes in nursing have been instituted, and 47 girls have passed the tests. Great interest attaches to this aspect of the Red Cross work.

The automobile clubs of Tasmania have subscribed £1,500 for the purchase of three motor ambulances. A large variety of comforts and necessaries have been placed on board two transports.

#### Northern Territory Division.

The women of Darwin responded eagerly to the invitation issued on May 19, 1915, to form a Northern Division of the Red Cross Society. A great deal of work had been completed during the short period of existence of this Division. Practically all the women of Pine Creek and Brock's Creek have been enrolled as members, and at the time of the issuing of the report the Division comprised 113 members. In these circumstances the Division may be heartily congratulated on having collected over £2,200, and on having kept their working expenses at a very low figure.

#### TOBACCO FUND.

Thanks to the energies and enthusiasm of Dr. H. M. Prins and Mr. M. J. O'Brien, the sum of £6 11s. has been collected in the Wickepin district toward the *Journal* contribution to the Over-seas Club Tobacco Fund. We wish to express our grateful appreciation.

Amount previously acknowledged, £25 0s. 7d.; Wogotin Debating Society (September 3) 18s., (October 4) 18s.; Mr. M. J. O'Brien (percentage of sweepstake), £2 10s.; Mr. C. S. Sabelberg, 5s.; Messrs. E. Kiely, T. Feeney, J. W. Hampel, A. L. Johnston, J. Ferrier, E. Sullivan, A. K. Buckley, E. Pennington, T. Bedford, C. Bode, H. W. Walters and Mrs. H. Snow, 2s. each; Messrs. J. Adams, C. Black, A. J. Brand, H. Billings, E. Kelly, L. O'Hara, H. Howard, A. J. Vertigan, Nys Dhu, A. A. Matthews, J. Ferrier, E. Campbell, E. Bauman, S. Thomas, Sam Cohen and Mrs. Green, 1s. each. Total, £31 11s. 7d.

#### SYDNEY AND SUBURBAN PROVIDENT MEDICAL ASSOCIATION.

The Annual Meeting of the Sydney and Suburban Provident Medical Association was held at the B.M.A. Building, 30-34 Elizabeth Street, Sydney, on October 27, 1915.

The following were elected office-bearers for the ensuing year (1915-16): -

President: Dr. E. H. Binney.  
 Honorary Secretary: Dr. A. A. O'Hara.  
 Honorary Treasurer: Dr. D. Luker.  
 Representing Consulting Staff: Dr. Sydney Jamieson,  
 Dr. G. E. Rennie, Dr. J. M. Gill.  
 Representing Active Staff: Dr. C. E. Corlette, Dr. A. I.  
 Blue, Dr. Geo. Bell, Dr. H. H. Parkinson, Dr. John  
 Harris, Dr. A. J. S. Brandon, Dr. A. J. Gibson, Dr.  
 Adam Newton, Dr. J. T. P. Tansey, Dr. C. H.  
 Northcott.

One representative from each of the district associations  
 will also be elected to the Executive Committee.

Hon. Treasurer's Statement, Year Ending 30th Sept., 1915.

#### LIABILITIES.

|                                   | £     | s. | d. |
|-----------------------------------|-------|----|----|
| Doctors' Dividends .. .. .        | 3,840 | 12 | 6  |
| Chemists' Accounts .. .. .        | 1,606 | 14 | 6  |
| Office Expenses—                  |       |    |    |
| Salaries .. .. .                  | 165   | 17 | 4  |
| Petty Cash .. .. .                | 26    | 19 | 7  |
| Stamps (Duty and Postage) .. .. . | 18    | 0  | 0  |
| Stationery .. .. .                | 17    | 15 | 0  |
| Telephone .. .. .                 | 10    | 5  | 0  |
| Rent .. .. .                      | 40    | 0  | 0  |
| Australia Day Donation .. .. .    | 52    | 10 | 0  |
| Balance to Credit .. .. .         | 63    | 8  | 0  |

£5,842 1 11

|                                | £     | s. | d. |
|--------------------------------|-------|----|----|
| Total Nett Collections .. .. . | 5,768 | 1  | 11 |
| Interest on Debentures .. .. . | 40    | 0  | 0  |
| Interest, Savings Bank .. .. . | 34    | 0  | 0  |

£5,842 1 11

#### BANK STATEMENT.

|                                    | £     | s. | d. |
|------------------------------------|-------|----|----|
| Deposits in Savings Banks .. .. .  | 1,090 | 7  | 0  |
| Interest to June 30, 1915 .. .. .  | 34    | 0  | 0  |
| B.M.A. Building Debentures .. .. . | 800   | 0  | 0  |

£1,933 7 0

October 20, 1915, Current Account, E. S. & A. .. £172 0 1

Each member is paying 9.173 pence per week.  
 Collectors' Expenses, 15.72%, which, with offices expenses,  
 4.6%, results in a total working expenses' rate of 20.3%  
 of income.

#### QUEEN MARY'S CONVALESCENT AUXILIARY HOSPITALS.

We have received the following letter, appealing for as-  
 sistance for our limbless sailors and soldiers:—  
 Sir,—

#### Our Limbless Sailors and Soldiers: An Appeal.

The Nation owes a special debt of gratitude to those  
 gallant men who have lost their limbs in the war. On  
 their behalf we make an earnest appeal for additional  
 funds to extend the work at Queen Mary's Convalescent  
 Hospitals, Roehampton, where these sufferers (officers  
 and men) are provided at the expense of the State with  
 their artificial appliances and taught how to use them.

The Hospitals are officially recognized by the Direc-  
 tors-General of the Navy and Army Medical Services  
 and the Lords Commissioners of the Royal Hospital,  
 Chelsea.

Over eight hundred patients are now awaiting ad-  
 mission, among them many men from our overseas do-  
 minions, and the numbers increase daily. To meet  
 this difficult situation a large outlay has been incurred  
 in the erection and equipment of new wards, which will  
 shortly be opened.

The work at Roehampton can best be judged by the  
 results achieved and by the gratitude of these brave  
 men on realizing, that, with the aid of the wonderful  
 artificial limbs of recent invention, they will be able  
 to obtain employment and make a fresh start in life.

With a view to their future employment, and also to  
 provide useful occupation for the men while in hos-  
 pital, workshops, fitted with model motor chassis, elec-  
 trical appliances, lathes, etc., are being organized, with  
 competent instructors. A man who has lost his right  
 hand will be taught to write with the left, and classes  
 for other industries will be arranged. An employment  
 bureau, working in conjunction with existing societies  
 and employers of labour, has also been established, and  
 already a number of men have been placed in good  
 situations. From the numerous offers received, it is  
 hoped, through this medium, to find suitable employ-  
 ment for every man on his leaving the hospital.

To maintain and extend this national work, a large,  
 additional sum of money is required, and we look with  
 confidence to a ready response to our appeal from pub-  
 lic and private sources, notwithstanding the urgency of  
 other claims. Donations sent to the Hon. Treasurer  
 at St. Stephen's House, Westminster, will be gratefully  
 acknowledged.

Yours obediently,  
 FRANCIS LLOYD, Major-General,  
 Chairman.  
 C. H. KENDERDINE,  
 Honorary Treasurer.

St. Stephen's House,  
 Westminster, S.W.,  
 September 25, 1915.

#### Obituary.

#### CHARLES LANCELOT HANDCOCK.

Dr. C. L. Handcock, whose death at Toronto, Lake Mac-  
 quarie, on November 3, we regret to record, was the son  
 of Rev. George Handcock, and was 60 years of age. He was  
 born at Chinrone, Roscrea, Ireland. He graduated in Arts  
 at Trinity College, Dublin, and a few years later, coming  
 to New South Wales, he entered the Faculty of Medicine  
 in the University of Sydney, and took the degrees of M.B.  
 and Ch.M. in the year 1894. During 21 years he practised  
 his profession in Goulburn, Ashburton (N.Z.), and Mus-  
 wellbrook, and by his genial nature and devotion to his  
 work won the esteem of those with whom he was brought  
 into contact. It was his practice every few years to go  
 to London for further study and experience under the lead-  
 ing men at the hospitals, and with the skill and confidence  
 so gained he undertook surgical work in the country.

Dr. Handcock was Medical Officer to the Brentwood Hos-  
 pital, Muswellbrook, and also Government Medical Officer  
 for the district.

Declining health determined him to give up his practice  
 about three months since, and it was vainly hoped that by  
 the rest and change at Toronto he would become stronger.

His funeral took place at Waverley Cemetery on the  
 day following his death.

#### Special Correspondence.

(From our London Correspondent.)

#### LONDON LETTER.

#### Medical Research Work and the War.

The Medical Research Committee of the National In-  
 surance Commissioners have issued an interim report on  
 the work in connexion with the war at present undertaken  
 by the Committee. The building and grounds of the Mount  
 Vernon Hospital, Hampstead, which the Committee had  
 acquired for conversion into the laboratories of their  
 Central Institute, were placed at the disposal of the War  
 Office at the outbreak of war, and are in use as a military  
 hospital. The whole resources of the statistical depart-  
 ment of the Committee, under the direction of Dr. John  
 Brownlee, have also been placed at the disposal of the  
 War Office, and the department is now carrying out the  
 compilation and analysis of the statistics of sick and  
 wounded from the military forces. In the view of the  
 Committee the compilation and analysis of these medical  
 statistics, in the circumstances of the present war, will

have a general value in providing information in various directions with regard to the health and stamina of the male population of these islands, in addition to its particular value from the special points of view of military requirements and of the Army Medical Service. The services of Dr. Brownlee and his assistants have also been lent for a statistical investigation of the male population of the German Empire and its present distribution, which has been undertaken in connexion with military purposes.

Sir Almoth Wright, in September, was appointed Consulting Physician to his Majesty's Forces Overseas, and he, with Captain Douglas and Lieutenant Parry Morgan, have since prosecuted important researches at Boulogne, bearing upon the treatment of infected wounds. Preliminary results of these inquiries have already been published, and have led to the circulation by the War Office of a Memorandum to all Medical Officers with the Forces at home or abroad with regard to their application in practice.

Dr. John Freeman, with an interpreter, was sent by the Committee last autumn to Galicia, in order to investigate the various strains of cholera infection, endemic or epidemic, in that district, and to bring to this country cultures of the chief strains. It appears important to the Committee that these strains should be available for the preparation of vaccines in view of the possible eventuality of a transference of infection to the Allied Forces in the Western theatre of war. The results of the expedition were placed at the disposal of the Inoculation Department of St. Mary's Hospital, which has been able already to supply large quantities of anti-cholera vaccines to the Serbian Government and to the British Forces in the Mediterranean area.

#### Science and the War.

Early in July, the annual meeting of the British Science Guild was held at the Institution of Electrical Engineers, under the chairmanship of the President, Sir William Mather.

During the meeting an address, advocating the necessity for the national organization of science, was delivered by Sir William Ramsay, the distinguished chemist.

Our existence as a nation was threatened, he said, and although he was an advocate of compulsory military service, he could not but admire the response to the call to arms. But it was not enough. Every man and woman must aid in combating the enemy. He thought the Government had missed a great chance. If they had declared cotton contraband of war in January, as they were implored from many quarters, in all probability the war would be nearing its end; the enemy would have run short of propulsive ammunition. The first essential for making up for lost time was organization. It was notorious that there was little inter-communication between the various Government Departments. Many of them were confronted by the same difficulties, and many of these difficulties should be overcome if scientific advice were asked. The prime necessity of the moment was a central body of scientific men to whom the Government Departments should be compelled to apply for advice and assistance. It should be within the province of such a central organization of science to propose new means of circumventing the enemy. It should have access to special information, and should be in close touch with all Departments of State by having State officials as assessors at the meetings of the committees. Instead of this centralization we had numerous small committees, composed of men who might be perfectly capable, but who were not in the public view—men whose mouths were muzzled because it had been decided to keep their names secret. There was no object in preserving secrecy as to the members of such committees. The effect of such small committees formed by various members of the Government had been to stop the organization of men of science. Those who were serving on the committees felt that they would be guilty of a breach of trust were they to take part in the formation of a strong central body to organize science. Hence attempts to elicit the views of the Fellows of the Royal Society and other societies had been blocked at the outset.

At the conclusion of Sir William Ramsay's address, the Chairman stated that he would inform the Prime Minister that the feeling of the meeting was that there was an

urgent necessity for a national organization of scientific men, and recommended that a start should be made at once in the direction of Lord Sydenham's Scheme, making the Royal Society a central body, with other scientific societies co-operating.

#### The Royal College of Surgeons.

The annual election to the Council of the Royal College of Surgeons took place on July 1, at the College. The following were elected:—1, Charles Ryall, Westminster Hospital, 449 votes; 2, C. J. Symonds, Guy's Hospital, 443 votes; 3, H. F. Waterhouse, Charing Cross Hospital, 317 votes; 4, F. F. Burghard, King's College Hospital, 301 votes; 5, W. G. Spencer, Westminster Hospital, 300 votes.

### Correspondence.

#### "THE VAGARIES OF THE JOURNAL."

Sir,—Dr. Woolnough may rest assured that the attitude of the *Journal* on the Schlink case, recognition of "black-legs," admission of foreigners from countries who do not practice reciprocity, and other matters, do not escape the notice of the real proprietors, i.e., those who keep it going and pay the salaries of the men who run it. They are quite capable of forming their own opinions as to the intolerable situation and the urgency of a complete change. If they all wrote letters, the *Journal* would at once double its reading matter, or be composed of nothing else but deep and bitter protests. Also, the situation is peculiar, as we are not in the habit of telling a paper in its own columns what we think of it, especially if what we have to say is more or less unfit for publication. It is to the Council, and, if necessary, a special general meeting of the Branch, that we must look for an outlet to our views. I suggest that all those who hold views of the sort I have indicated above should write them at once to their various Branch Councils before sending their resignations in. There is still six weeks to the end of the year, and a lot may happen in that short time.

Yours, etc.,

A. G. CRIBB.

"Highbury," Millthorpe, N.S.W.,  
November 12, 1915.

#### THE BACTERIOLOGY OF CEREBRO-SPINAL MENINGITIS.

Sir,—An interesting article on the above subject appears in your issue of November 6, from the pen of Dr. Webster. I was interested in two of the statements:—

(a) That the organism isolated did not, as a rule, ferment maltose, even after two weeks.

There were 14 lumbar puncture fluids containing meningococcus in this hospital during the present epidemic. In all but one case a Gram-negative diplococcus, which fermented both glucose and maltose, but not saccharose, was obtained. The glucose usually showed acidity at the end of 24 to 36 hours, the maltose going somewhat slower, 48 to 60 hours.

(b) That in examining military contacts, the procedure was to report as to the presence of Gram-negative diplococci, because four or five days was the shortest time for a conclusive result.

Having examined a considerable number of naso-pharyngeal swabbings, I may state that it is quite easy to get Gram-negative diplococci, often intracellular, in every case. In getting conclusive results by fermentation tests, it is found, as a rule, that Gram-negative diplococci fall into four groups.

(i.) A group, whose chief member is *catarrhalis*, which does not ferment any of the sugars.

(ii.) A group fermenting saccharose, which is not meningococcus.

(iii.) A glucose fermenting group, which does not ferment either maltose or saccharose. This may possibly be a meningococcus of the type isolated by Dr. Webster in Melbourne.

(iv.) A group fermenting glucose and maltose, but not saccharose, which is definitely meningococcus.



For a quick examination of the throat, I have been in the habit of placing smears directly on to glucose serum agar plates, and 24 hours later picking off glucose fermenting colonies. These, if in pure culture, prove to be Gram-negative diplococci, are tentatively accepted as meningococcus, whilst being put through confirmatory tests, which usually take a further one to two days.

Yours, etc.,

WOLFE S. BROWN, M.B., Ch.M.,  
Senior Pathologist.

Royal Prince Alfred Hospital, Sydney,  
November 15, 1915.

#### A QUESTION OF PRACTICE.

Sir,—A senior practitioner, who has been compelled by illnesses to be absent from his practice for lengthened periods on several occasions, has been repeatedly asked by junior practitioners, who are attending some of his former year-long patients, as to the patient's former history and treatment. Should the senior impart this information merely as a matter of courtesy, or should he insist on the payment of a consultant's fee for such information?

Yours, etc.,  
SENIOR.

[If the junior practitioners referred to by Senior desire the information, the consent of the patients or of the patients' friends should be obtained before any communication is made. The question as to whether any fee should be paid must depend on the circumstances obtaining. It would, however, be unusual to claim a fee unless the senior practitioner is prepared to meet his colleague in consultation, and give him the full benefit of his experience and advice.]

#### Medical Appointments.

Dr. C. H. Cormac has been appointed Acting Quarantine Officer at Bowen, Queensland, during the absence on sick leave of Dr. Gillies.

Dr. A. J. J. Triado has been appointed Quarantine Officer at Carnarvon, Western Australia, in place of Dr. V. H. Gordon (resigned).

Mr. C. J. Dickinson has been appointed Chief Quarantine Officer for Animals, Northern Territory, in place of Mr. J. F. McEachran.

#### Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xi.

Commonwealth Military Forces, Principal Medical Officer.  
Queen's Memorial Infectious Diseases Hospital, Fairfield,  
Senior Assistant Medical Officer.

Royal Hospital for Women, Paddington, Resident Medical Officer.

Hampden District Hospital, Friezland, Queensland, Resident Medical Officer.

#### Diary for the Month.

- Nov. 24.—Victorian Branch, B.M.A., Council.
- Nov. 24.—Victoria Branch, B.M.A., Ballot Papers issued for Election of Officers.
- Nov. 25.—South Australian Branch, B.M.A., Monthly.
- Nov. 26.—Melbourne Hospital Clinical Society.
- Nov. 26.—N.S.W. Branch, B.M.A., Ordinary.
- Nov. 30.—Victorian Branch, B.M.A., Eye and Ear Section.

- Nov. 30.—N.S.W. Branch, B.M.A., Organization and Science Committee, Medical Politics Committee.
- Dec. 1.—Victorian Branch, B.M.A., Annual General Meeting.
- Dec. 8.—South Sydney Medical Association, N.S.W.
- Dec. 8.—Melbourne Pediatric Society.
- Dec. 9.—Victorian Branch, B.M.A., Council.
- Dec. 10.—Queensland Branch, B.M.A., Annual Meeting.
- Dec. 14.—Tasmanian Branch, B.M.A., Monthly and Council.
- Dec. 15.—Victorian Branch, B.M.A., Clinical.
- Dec. 17.—N.S.W. Branch, Ordinary.
- Dec. 17.—Queensland Branch, B.M.A., Council.

#### Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

| Branch.  | APPOINTMENTS.  |
|--|--|
| QUEENSLAND.<br>(Hon. Sec. B.M.A. Building, Adelaide Street, Brisbane). | Brisbane United F.S. Institute.  |
| WESTERN AUSTRALIA.<br>(Hon. Sec. 230 St. George's Terrace, Perth).     | Swan District Medical Officer.<br>All Contract Practice Appointments in W.A.<br>Arnccliffe F.S. Lodges.<br>Australian Natives Association.<br>Balmain United F.S. Dispensary.<br>Burwood District F.S. Institute.<br>Canterbury United F.S. Dispensary.<br>Goulburn F.S. Association.<br>Leichhardt and Petersham Dispensary.<br>M.U. Oddfellows Med. Inst., Elizabeth Street, Sydney.<br>Marrickville United Friendly Societies' Dispensary.<br>Mullumbimby District Friendly Societies.<br>N.S.W. Ambulance Association and Transport Brigade.<br>N. Sydney United F.S.<br>People's Prudential Benefit Society.<br>Phoenix Mutual Provident Society.<br>F.S. Lodges at Casino.<br>F.S. Lodges at Litngow.<br>F.S. Lodges at Mudgee, (except A.H.C.G.)<br>F.S. Lodges at Orange.<br>F.S. Lodges at Parramatta, Penrith, and Auburn.<br>F.S. Lodges at Wellington.<br>Newcastle Collieries—Killingworth.<br>Seaham Nos. 1 and 2.<br>West Wallsend. |
| NEW SOUTH WALES.<br>(Hon. Sec. 30-34 Elizabeth Street, Sydney).        |  |
| SOUTH AUSTRALIA.<br>(Hon. Sec. 3 North Terrace, Adelaide).             | The F.S. Medical Assoc. Incorp. Adelaide.  |

#### EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.